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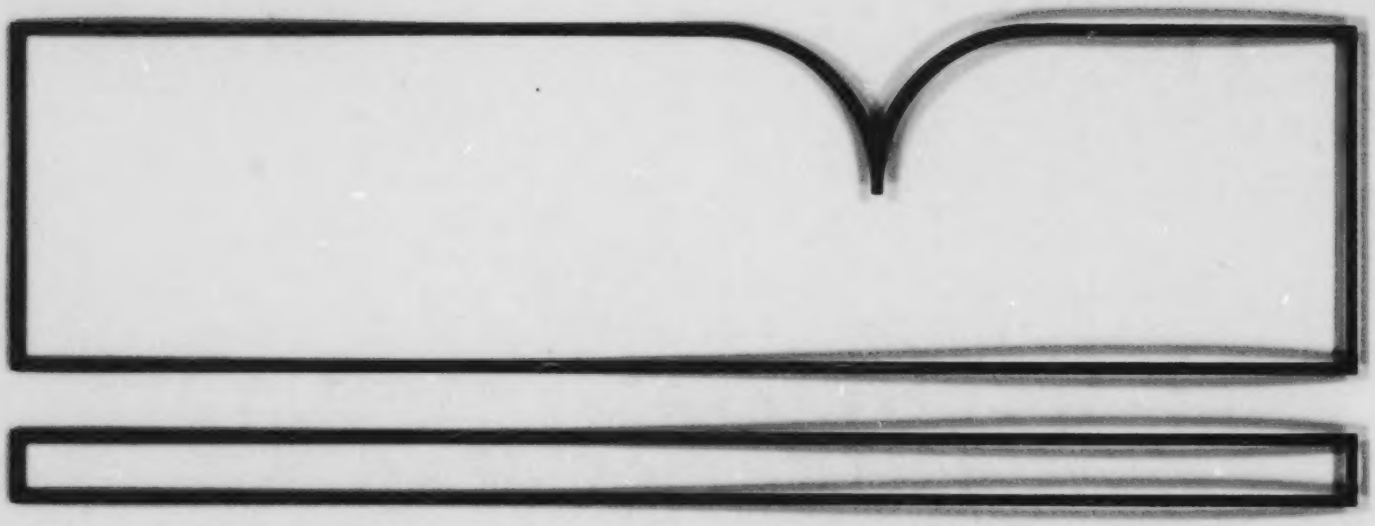
National Air Toxics Information Clearinghouse: Ongoing Research and Regulatory Development Projects, July 1988

Radian Corp., Research Triangle Park, NC

Prepared for

Environmental Protection Agency
Research Triangle Park, NC

Jul 88



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NATIONAL AIR TOXICS INFORMATION CLEARINGHOUSE

EPA Office of Air Quality Planning and Standards
Research Triangle Park, North Carolina 27711

STAPPA / ALAPCO State and Territorial Air Pollution Program Administrators
Association of Local Air Pollution Control Officials

Ongoing Research and Regulatory Development Projects

July 1988

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NATIONAL AIR TOXICS INFORMATION CLEARINGHOUSE: ONGOING RESEARCH AND REGULATORY DEVELOPMENT PROJECTS

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PREFACE

In response to State and local agency requests for air toxics information, EPA has designed and is implementing the National Air Toxics Information Clearinghouse. This information dissemination center has been developed in cooperation with the State and Territorial Air Pollution Program Administrators (STAPPA) and the Association of Local Air Pollution Control Officials (ALAPCO).

The purpose of this document, published by the National Air Toxics Information Clearinghouse, is to inform State and local agencies and other Clearinghouse users of current research and regulatory development projects underway at the U. S. Environmental Protection Agency (EPA), the National Institute for Occupational Safety and Health (NIOSH), and State and local agencies, and to help them identify sources of specific air toxics information. Every effort has been made to ensure accuracy as of April 1988, the date that compilation of information was completed. However, future changes in agency priorities and funding levels may change the scope and estimated project completion dates.

This document is the 1988 update of the annual National Air Toxics Information Clearinghouse ongoing research document, last published in June 1987. The Clearinghouse plans to continue updating this document on an annual basis. Other documents published by the Clearinghouse include:

- National Air Toxics Information Clearinghouse: Rationale for Air Toxics Control in Seven State and Local Agencies, EPA-450/5-86-005, PB86-181179/AS, August 1985;
- National Air Toxics Information Clearinghouse: How The Clearinghouse Can Help to Answer Your Air Toxics Questions, EPA-450/5-86-009, PB88-157813/AS, July 1986;
- National Air Toxics Information Clearinghouse: Methods for Pollutant Selection and Prioritization, EPA-450/5-86-010, PB87-124079/REB, July 1986;

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- National Air Toxics Information Clearinghouse: Qualitative and Quantitative Cancer Risk Assessment, EPA-450/5-87-003, PB88-113188/AS, June 1987;
- National Air Toxics Information Clearinghouse Report on State, Local, and EPA Air Toxics Activities, EPA-450/5-87-006, PB88-113428/AS, July 1987;
- National Air Toxics Information Clearinghouse: NATICH Data Base Users Guide for Data Entry and Editing, EPA-450/5-88-001, NTIS number not yet available, February 1988;
- National Air Toxics Information Clearinghouse: NATICH Data Base Users Guide for Data Viewing, EPA-450/5-88-002, PB88-197470, February 1988;
- National Air Toxics Information Clearinghouse: Case Studies in Risk Communication, EPA-450/5-88-003, NTIS number not yet available, May 1988;
- National Air Toxics Information Clearinghouse Newsletter, A Periodical, 21 issues to date, December 1983 - May 1988; and
- National Air Toxics Information Clearinghouse: Bibliography of Selected Reports and Federal Register Notices Related to Air Toxics, Three Volumes: EPA-450/5-87-005, PB88-13660/AS (Volume 1: Citations), July 1987; EPA-450/5-88-005, NTIS number not yet available (Volume 2: Citations - 1988), July 1988; and EPA-450/5-88-006, NTIS number not yet available (Index - 1988), July 1988.

ABSTRACT

The National Air Toxics Information Clearinghouse has been established by the EPA's Office of Air Quality Planning and Standards for the purpose of facilitating information transfer among Federal, State, and local air quality management agencies. This document has been published as part of that effort. Its purpose is to inform State and local agencies and other Clearinghouse users of U. S. Environmental Protection Agency (EPA), National Institute for Occupational Safety and Health (NIOSH), and State and local agency research and EPA regulatory development projects concerning toxic air pollutants.

The document is divided into two parts and an appendix. The first part lists 365 air toxics projects currently in progress at EPA, NIOSH, and State and local agencies. A brief description of each project and a contact name, office, and telephone number are given. The second part of the document contains the index that allows readers to locate projects of interest. Projects are indexed by agency, project type, chemical name, Chemical Abstract Service (CAS) number, and source category Standard Industrial Classification (SIC) Code. The appendix lists regulatory development projects on toxic chemicals underway at the EPA's Office of Drinking Water (ODW). While most of these projects are not directly related to air problems, health information on toxic chemicals from ODW projects may be of interest to Clearinghouse users.

This work complements information contained in the Clearinghouse documents entitled "National Air Toxics Information Clearinghouse: Bibliography of Selected Reports and Federal Register Notices Related to Air Toxics, Volume 1: Citations," July 1987 (EPA-450/5-87-005), Volume 2: Citations - 1988, July 1988 (EPA-450/5-88-005) and Index - 1988, July 1988 (EPA-450/5-88-006).

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INTRODUCTION

This list of ongoing research and regulatory development activities has been compiled by the National Air Toxics Information Clearinghouse as one of several tools designed to facilitate information exchange on air toxics. A total of 365 ongoing projects concerning toxic air pollutants are listed. These projects have been funded by the EPA, NIOSH, or State and local agencies. The sponsoring agency, a contact name and telephone number, and a description of the work are provided for each project. To facilitate use of this document, the projects are indexed by sponsoring agency, project type, chemical name and CAS registry number, source category SIC Code, and SIC Code title.

This document is designed to help Clearinghouse users identify sources of information for specific air toxics questions or problems. It is an updated version of the June 1987 Clearinghouse "Ongoing Research and Regulatory Development Projects" document (EPA-450/5-87-004, PB88-113196/REB). The list of projects contained in this document focuses on studies which have not yet resulted in publicly available reports. The list indicates estimated completion dates as well as a contact person who can provide study details. In future updates of this document, new projects will be added, and the dates and names previously provided will be updated as required. Projects which have been completed since the last edition have been removed. Some of these projects resulted in published reports which are listed in the July 1988 Clearinghouse publication "Bibliography of Selected Reports and Federal Register Notices Related to Air Toxics, Volume 2: Citations - 1988."

DOCUMENT SCOPE

Eighteen types of projects which are considered to be of greatest interest to agencies concerned with the regulation of toxic air pollutants are included in this compilation. Both basic scientific research projects

and studies conducted to assess the need for regulations and/or to support regulatory development activities have been included. Federal regulations may or may not be developed for sources and/or pollutants covered by these projects. The 18 categories of projects are briefly defined below.

1. Accident Prevention/Emergency Response - These projects range in scope from establishing accident prevention and emergency response measures to evaluating releases or spills and preparing appropriate responses to the accident. This includes procedures under development to meet the SARA Title III community-right-to-know program requirements.
2. Ambient Monitoring - Projects involving the development of monitoring methodologies for toxic air pollutants and actual monitoring studies.
3. CHIPs - Chemical Hazard Information Profile - In these studies, EPA's Office of Toxic Substances (OTS) compiles preliminary information about sources, environmental distribution, exposure and health effects of specific chemicals.
4. Control Technology - Projects addressing control of air toxics from specific sources or mitigation of effects from toxic air pollutants in a geographic area (i.e., effects of urban soup).
5. Dispersion Modeling - Projects in which dispersion modeling of an air pollution source or sources emitting toxic air pollutants is performed. Often these projects will require source evaluation and characterization prior to any modeling.
6. Emission Factor Documents - These projects examine the sources and emissions of specific pollutants.
7. Epidemiology Studies - Epidemiology studies examining human health effects possibly resulting from exposure to toxic air pollutants.
8. Exposure Assessments - Projects involving the estimation of the population exposure to ambient concentrations of specific chemicals.
9. Health Assessments - Projects that result in the compilation of information on health effects of specific chemicals.

10. Indoor Air - Projects relating to indoor air pollutants, including monitoring and health and exposure assessments of indoor air pollutants.

11. NESHAP - OAQPS projects to support the development of national emission standards for hazardous air pollutants (NESHAP) under Section 112 of the Clean Air Act. These projects may include collecting or generating the following types of information: an analysis of the affected industry or air pollution source including emissions data and applicable control technology; an analysis of regulatory alternatives in terms of potential environmental, economic, and energy impacts; and health information including exposure and risk assessments.

12. NSPS - OAQPS projects to support the development of new source performance standards (NSPS) for sources of certain hazardous air pollutants under Section 111 of the Clean Air Act. These projects may involve gathering or generating the following types of information: an analysis of the affected industry or air pollution source including emissions data and applicable control technology and an analysis of regulatory alternatives in terms of potential environmental, economic, and energy impacts.

13. Pre-Regulatory Assessments - Projects that include reviewing the health effects, sources, emissions to the ambient air, and potential for public exposure to specific pollutants in order to decide whether these pollutants should be regulated under the Clean Air Act or other appropriate mechanisms.

14. Regulatory Development Guidance - EPA-funded projects that provide guidance to State and local agencies on development of air toxics control programs.

15. Risk Assessments - Projects that estimate potential human risks resulting from exposure to hazardous air pollutants.

16. Source Assessments - Projects involving the identification and quantification of emissions from specific source categories and evaluating applicable control technologies.

17. Source Sampling - Projects involved in the development of source sampling methodologies or that include sampling specific sources of hazardous air pollutants.

18. Toxicity Testing - Laboratory studies assessing adverse health effects associated with exposure to one or more chemicals.

The following EPA offices were contacted for lists of projects within these 18 categories:

- Office of Air and Radiation,
- Office of Pesticides and Toxic Substances,
- Office of Solid Waste and Emergency Response,
- Office of Research and Development, and
- Regional Offices for all 10 EPA Regions.

The National Institute for Occupational Safety and Health (NIOSH) under the Department of Health and Human Services was also contacted. In selecting projects from these lists, emphasis was placed on projects dealing with toxic air pollutants which belong to the categories listed above. State and local agencies submit their project lists directly to the Clearinghouse.

The Office of Drinking Water projects have been listed in the Appendix. While not specifically air related, health information on toxic pollutants resulting from ODW projects may be helpful to Clearinghouse users.

USING THIS DOCUMENT

This document has been divided into two parts and an appendix. Part 1 contains individual entries for 365 ongoing research and regulatory development projects. The EPA and NIOSH projects appear first, followed by State and local agency projects. Project entries are numbered sequentially throughout Part 1, beginning with the prefix CL-BIB or with the two-letter postal code abbreviation for the State for State/local agency projects.

Breaks in numerical sequence indicate the removal of previous entries after completion of the specific project. Each entry generally contains the following elements:

- Project Title,
- Status of Project,
- Contact Office, Name, and Telephone Number,
- Chemical Abstract Services (CAS) Registry Number,
- Chemical Name,
- Air Pollution Source,
- Project Type, and
- Project Description (seven lines maximum).

The Status of Project field contains the start date and anticipated completion date, if known. Any proposed publication information, if appropriate, is also included. Since most NIOSH projects are long-term projects, journal articles on various phases of a project may be published before the overall project completion date shown in the entry. In the case of emission standards projects (NESHAP and NSPS), the entry indicates whether the standard is currently in the proposal or promulgation stage.

The next element in each project entry lists the office doing the work and the name and telephone number of the Project Officer or other knowledgeable contact. Abbreviations used for the offices and the telephone number for each office are included in Table 1.

The CAS number, chemical name, and source fields may not be applicable to all entries. For example, projects that deal with groups of chemicals such as "organic compounds" or "heavy metals" rather than specific pollutants cannot be assigned CAS numbers. Several special Clearinghouse acronyms prefaced with "CL- " have been assigned to groups of common pollutant types where no CAS number was applicable. The list of Clearinghouse chemical acronyms is shown in Table 2. In some projects dealing with specific source categories, lists of chemicals emitted are not yet available, so "various" has been used under Chemical Name. Other chemical-specific projects may not deal with specific air pollution sources.

TABLE 1. KEY TO ABBREVIATIONS USED IN THIS DOCUMENT

Abbreviation				
Office	Division	Branch	Name	Telephone
1. Environmental Protection Agency (EPA) Offices				
a. Office of Air and Radiation (OAR)				(202) 382-7400 (FTS) 382-7400
OAQPS/			Office of Air Quality, Planning and Standards	(919) 541-5615 (FTS) 629-5615
	ESD/		Emission Standards Division	(919) 541-5572 (FTS) 629-5572
		SDB	Standards Development Branch	(919) 541-5579 (FTS) 629-5579
		PAB	Pollutant Assessment Branch	(919) 541-5647 (FTS) 629-5647
		ISB	Industrial Studies Branch	(919) 541-5596 (FTS) 629-5596
		CPB	Chemicals and Petroleum Branch	(919) 541-5674 (FTS) 629-5674
		CTC	Control Technology Center	(919) 541-0800 (FTS) 629-0800
	TSD/		Technical Services Division	(919) 541-5536 (FTS) 629-5536
		MRB	Monitoring and Reports Branch	(919) 541-5559 (FTS) 629-5559
		SRAB	Source Receptor Analysis Branch	(919) 541-5561 (FTS) 629-5561
		EMB	Emissions Measurement Branch	(919) 541-5544 (FTS) 629-5544
	AQMD/		Air Quality Management Division	(919) 541-5621 (FTS) 629-5621
		NPPB	Noncriteria Pollutant Programs Branch	(919) 541-5586 (FTS) 629-5586

TABLE 1. KEY TO ABBREVIATIONS USED IN THIS DOCUMENT (Continued)

Abbreviation				
Office	Division	Branch	Name	Telephone
	SSCD/		Stationary Source Compliance Division	(202) 382-2807 (FTS) 382-2807
ORP/			Office of Radiation Programs	(202) 475-9600 (FTS) 475-9600
	CSD/		Criteria and Standards Division	(202) 475-9605 (FTS) 475-9605
		ESB	Environmental Standards Branch	(202) 475-9610 (FTS) 475-9610
OPD/			Office of Program Development	(202) 382-7407 (FTS) 382-7407
b. Office of Research and Development (ORD)				
OHEA/			Office of Health and Environmental Assessment	(202) 382-7317 (FTS) 382-7317
	CAG		Carcinogen Assessment Group	(202) 382-5898 (FTS) 382-5898
	REAG		Reproductive Effects Assessment Group	(202) 475-7303 (FTS) 475-7303
	EAG		Exposure Assessment Group	(202) 475-8909 (FTS) 475-8909
	ECAO-RTP		Environmental Criteria and Assessment Office, Research Triangle Park, NC	(919) 541-4173 (FTS) 629-4173
	ECAO-CI		Environmental Criteria and Assessment Office, Cincinnati, OH	(513) 569-7531 (FTS) 684-7431
OHR/			Office of Health Research	(202) 382-5900 (FTS) 382-5900
	HERL		Health Effects Research Laboratory	(919) 541-2281 (FTS) 629-2281

TABLE 1. KEY TO ABBREVIATIONS USED IN THIS DOCUMENT (Continued)

Abbreviation				
Office	Division	Branch	Name	Telephone
OEPER/			Office of Environmental Processes and Effects Research	(202) 382-5950 (FTS) 382-5950
	Kerr ERL-OK		Kerr Environmental Research Laboratory, Oklahoma	(405) 332-2224 (FTS) 743-2224
OEETD/			Office of Environmental Engineering and Technology Demonstration	(202) 382-2600 (FTS) 382-2600
	AEERL/		Air and Energy Engineering Research Laboratory	(919) 541-2822 (FTS) 629-2822
		CIAD/	Combustion and Indoor Air Division	(919) 541-2746 (FTS) 629-2746
		CRB	Combustion Research Branch	(919) 541-2477 (FTS) 629-2477
		IAB	Indoor Air Branch	(919) 541-2746 (FTS) 629-2746
		ATRD/	Air Toxics Research Division	(919) 541-4134 (FTS) 629-4134
		ATCB	Air Toxics Control Branch	(919) 541-2818 (FTS) 629-2818
		IPB	Industrial Processes Branch	(919) 541-2853 (FTS) 629-2853
	HWERL-Cin		Hazardous Waste Engineering Research Laboratory - Cincinnati, OH	(513) 569-7418 (FTS) 684-7418
	HWERL-Edi		Hazardous Waste Engineering Research Laboratory - Edison, NJ	(201) 321-6635 (FTS) 340-6635

TABLE 1. KEY TO ABBREVIATIONS USED IN THIS DOCUMENT (Continued)

Abbreviation			Name	Telephone
Office	Division	Branch		
OADEMQA/			Office of Acid Deposition, Environmental Monitoring and Quality Assurance	(202) 382-5767 (FTS) 382-5767
	ASRL-RTP		Atmospheric Sciences Research Laboratory	(919) 541-2191 (FTS) 629-2191
	EMSL-RTP		Environmental Monitoring Systems Laboratory	(919) 541-2106 (FTS) 629-2106
c. Office of Pesticides and Toxic Substances (OPTS)				(202) 382-2902 (FTS) 382-2902
OTS/			Office of Toxic Substances	(202) 382-3813 (FTS) 382-3813
	ECAD/		Existing Chemicals Assessment Division	(202) 382-3443 (FTS) 382-3443
		CSB	Chemical Screening Branch	(202) 382-3436 (FTS) 382-3436
		RAB	Risk Analysis Branch	(202) 382-3832 (FTS) 382-3832
OPP/			Office of Pesticide Programs	(202) 557-7090 (FTS) 557-7090
	RD/		Registration Division	(202) 557-7760 (FTS) 557-7760
	HED/		Hazard Evaluation Division	(703) 557-7695 (FTS) 557-7695
		EAB	Exposure Assessment Branch	(703) 557-3935 (FTS) 557-3935
d. Office of Solid Waste and Emergency Response (OSWER)				(202) 382-4610 (FTS) 382-4610
OSW/			Office of Solid Waste	(202) 382-4627 (FTS) 382-4627

TABLE 1. KEY TO ABBREVIATIONS USED IN THIS DOCUMENT (Continued)

Abbreviation			Name	Telephone
Office	Division	Branch		
	WMD/		Waste Management Division	(202) 475-7276 (FTS) 475-7276
OERR/			Office of Emergency and Remedial Response	(202) 382-2180 (FTS) 382-2180
	HSC/		Hazardous Site Control Division	(202) 382-2180 (FTS) 382-2180
	ERD/		Emergency Response Division	(202) 382-8720 (FTS) 382-8720
e. Office of Water (OW)				(202) 382-5700 (FTS) 382-5700
ODW/			Office of Drinking Water	(202) 382-5543 (FTS) 382-5543
EPA Regional Offices				
	Reg. I		Region I, Air Management Division, Boston, MA	(617) 565-3236 (FTS) 835-3236
	Reg. II		Region II, Air and Waste Management Division, New York, NY	(212) 264-2301 (FTS) 264-2301
	Reg. III		Region III, Air Management Division, Philadelphia, PA	(215) 597-9390 (FTS) 597-9390
	Reg. IV		Region IV, Air, Pesticides, and Toxics Management Division, Atlanta, GA	(404) 347-3043 (FTS) 257-3043
	Reg. V		Region V, Air and Radiation Management Division, Chicago, IL	(312) 353-2212 (FTS) 353-2212
	Reg. VI		Region VI, Air, Pesticides, and Toxics Management Division, Dallas, TX	(214) 655-7200 (FTS) 255-7200

TABLE 1. KEY TO ABBREVIATIONS USED IN THIS DOCUMENT (Continued)

Abbreviation			Name	Telephone
Office	Division	Branch		
	Reg. VII		Region VII, Air and Toxics Division, Kansas City, KS	(913) 236-2893 (FTS) 757-2893
	Reg. VIII		Region VIII, Air and Toxics Division, Denver, CO	(303) 293-1438 (FTS) 564-1438
	Reg. IX		Region IX, Air Management Division, San Francisco, CA	(415) 974-8201 (FTS) 454-8201
	Reg. X		Region X, Air and Toxics Division, Seattle, WA	(206) 442-4762 (FTS) 399-4762
2. National Institute for Occupational Safety and Health (NIOSH)				
	OPPE/		Office of Program Planning and Evaluation	(404) 639-3794 (FTS) 236-3794
	DBBS/		Division of Biomedical and Behavioral Sciences, Cincinnati, OH	(513) 533-8465 (FTS) 684-8465
		ABPB	Applied Biology and Physics	(513) 533-8383 (FTS) 684-8383
		APEB	Applied Physiology and Ergonomics Branch	(513) 533-8383 (FTS) 684-8383
		ETB	Experimental Toxicology Branch	(513) 533-8392 (FTS) 684-8392
		TSB	Technical Support Branch	(513) 533-8433 (FTS) 684-8433
	DRDS/		Division of Respiratory Disease Studies, Morgantown, WV	(304) 291-4474 (FTS) 923-4474
		LIB	Laboratory Investigations Branch	(304) 291-4281 (FTS) 923-4281

TABLE 1. KEY TO ABBREVIATIONS USED IN THIS DOCUMENT (Continued)

Abbreviation			Name	Telephone
Office	Division	Branch		
		CIB	Clinical Investigations Branch	(304) 291-4223 (FTS) 923-4223
		ENIB	Environmental Investigations Branch	(304) 291-4304 (FTS) 923-4304
		EPIB	Epidemiology Investigations Branch	(304) 291-4476 (FTS) 923-4476
	DSHEFS/		Division of Surveillance, Hazard Evaluations, and Field Studies, Cincinnati, OH	(513) 841-8235 (FTS) 684-8235
		IWSB	Industry Wide Studies Branch	(513) 841-4366 (FTS) 684-4366
		SB	Surveillance Branch	(513) 841-4303 (FTS) 684-4303

TABLE 2. CLEARINGHOUSE CHEMICAL IDENTIFIERS

Clearinghouse CAS #	Pollutant
CL-ABRAS	Abrasives
CL-ACID	Acidic compounds
CL-ADIP	Adipates
CL-ALDEHYD	Aldehydes
CL-ALLERG	Allergans
CL-AMINE	Amines
CL-BROM	Bromine compounds
CL-BTX	Benzene, toluene, xylene
CL-CARBON	Total carbon
CL-CARCIN	Carcinogens
CL-CFC	Chlorofluorocarbons
CL-CHC	Chlorinated hydrocarbons
CL-CHROME	Chromium compounds
CL-CHLOR	Chlorine compounds
CL-COE	Coke oven emissions
CL-COTDUST	Cotton dust
CL-CREOSOL	Creosols
CL-CUTFLU	Cutting fluids
CL-DGAEA	Diethylene gycol alkyl ethers and acetates
CL-DIESEL	Diesel fuel emissions
CL-DIISOCY	Diisocyanates
CL-DIOXIN	Dioxins
CL-DYE	Dyes
CL-ETS	Environmental tobacco smoke
CL-EXPLO	Explosives
CL-FUELOIL	Waste derived fuel oil emissions
CL-FURAN	Furans
CL-HALOME	Halomethanes
CL-HAZWAST	Hazardous wastes
CL-HERB	Herbicides
CL-HCARB	Hydrocarbons
CL-IAP	Indoor air pollutants
CL-INORGAN	Inorganic compounds
CL-METAL	Metallic compounds
CL-METOXBZ	Methoxybenzene compounds
CL-MINDUST	Mineral dusts
CL-MINFIB	Mineral fibers
CL-MS	Mineral spirits
CL-NITRATE	Nitrates
CL-NITRITE	Nitrites
CL-NITROSO	Nitroso compounds
CL-NMHC	Non-methane hydrocarbons
CL-ODOR	Odors
CL-OH	Hydroxide

TABLE 2. CLEARINGHOUSE CHEMICAL IDENTIFIERS (Continued)

Clearinghouse CAS #	Pollutant
CL-ORGANIC	Organic compounds
CL-PAH	Polycyclic aromatic hydrocarbons
CL-PCO	Photochemical oxidants
CL-PEST	Pesticides
CL-PHENOL	Phenols
CL-PHOSPHA	Phosphates
CL-PHTH	Phthalates
CL-PLAS	Plasticizers
CL-PM	Particulate matter
CL-POM	Polycyclic organic matter
CL-RAD	Radiation
CL-RESIN	Resins
CL-SALTS	Salts
CL-SEWSLUD	Sewage sludge
CL-SOLVENT	Solvents
CL-SULFATE	Sulfates
CL-SULFIDE	Sulfides
CL-SULFITE	Sulfites
CL-SVOC	Semivolatile organic compounds
CL-TIN	Organic tin compounds
CL-TRS	Total reduced sulfur
CL-VARIOUS	Various pollutants
CL-VEG	Vegetable oil mist
CL-VOC	Volatile organic compounds
CL-WELD	Welding fumes
CL-WOOD	Wood smoke

In these cases, the Air Pollution Source field of the entry has been omitted. Wherever possible, an effort has been made to list the specific chemical name(s), CAS registry number(s), and/or source type(s) for each project. Figure 1 gives an example of a typical entry.

If a project clearly falls into 1 of the 18 categories listed above, only that one project type is listed in the entry. However, there is often overlap between the kinds of information included in these categories, therefore, more than one is selected based on the project title and description.

The final element provides a brief description of the project. It has been limited to seven lines; therefore, it is somewhat general in nature.

Part 2 of the document consists of the index. This is organized both alphabetically and numberically. Each project is indexed by project type, CAS number, chemical name, SIC Code and the corresponding SIC Code title, and the agency conducting the work. These indices allow users to locate projects pertaining to a specific chemical, source, or type of information. For example, if information is desired on a specific chemical, it can be obtained by looking up the chemical name in the index or by looking up the CAS Number for that chemical. Under the chemical name are a list of titles and project numbers (e.g., CL-BIB-0193 or CA001 010). Using this project number, one can look up the projects of interest in Part 1 of this document. Similarly this process can be done for various source types for which there are SIC Codes. For example, if information on projects related to steel or the chemical industry was desired, a listing could be found alphabetically in the index under each of these categories. If an entry contains more than one project type, it is listed in the index under each applicable project type. Only those chemical names, CAS numbers, and sources with SIC Codes used in the 18 project descriptions are found in the index. A table of contents to the index is found at the beginning of Part 2. This lists all terms found in the index and the index page number where the term and associated projects are listed.

Regulatory development projects underway at the EPA Office of Drinking Water (ODW) are summarized in the Appendix. While these projects are not specifically air related, Clearinghouse users may find toxic chemical

FIGURE 1. SAMPLE ENTRY

CL-BIB-0257

TITLE:	Engineering Study: Standards Development for Hazardous Waste Treatment, Storage, and Disposal Facilities
STATUS:	Started 10/79; complete 2/99
CONTACT:	OAQPS/ESD/CPB, Kent Hustvedt (919) 541-5395
CAS NUMBER:	CL-HAZWAST, 75-07-0, CL-VOC, 75-44-5, 7440-43-9
CHEMICAL:	Hazardous waste, acetaldehyde, volatile organic compounds. phosgene, cadmium
SOURCE TYPE:	Hazardous Waste Treatment, Storage, and Disposal Facilities
PROJECT TYPE:	Pre-regulatory Development, NESHAP Development, Emission Factor, Control Technology
DESCRIPTION:	The purpose of this project is to analyze the effects of organic air emissions from (RCRA) permitted hazardous waste treatment, storage, and disposal facilities. Regulatory options will be studied and standards proposed.

information generated by ODW useful. For example, background documents for setting Maximum Contaminant Levels under the Safe Drinking Water Act contain health information on toxic chemicals and many chemicals being studied by ODW are also potential air pollutants. The Appendix contains a brief description of ODW regulatory development activities and lists of chemicals currently under study.

Information in this report is also available through the National Air Toxics Information Clearinghouse computerized data base known as NATICH. By accessing the data base on-line, the user may identify ongoing project citations by a combination of factors such as pollutant name or CAS number, SIC Code, project type, and/or sponsoring agency (EPA, NIOSH, or State/local agency). For more information on accessing NATICH, contact the Clearinghouse staff at (919) 541-0850 or (FTS) 629-0850.

PART 1 - PROJECT SUMMARIES

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CL-BIB-0010

TITLE: Cadmium NESHAP
STATUS: Ongoing
CONTACT: OAQPS/ESD/ISB, Jim Crowder (919) 541-5596
CAS NO: 7440-43-9
CHEMICAL: CADMIUM
PROJECT TYPE: NESHAP
DESCRIPTION: No regulatory decisions have been made to date. Proposal for this Cadmium NESHAP is uncertain.

CL-BIB-0012

TITLE: Coke Oven Emissions: Charging, Topside Leaks, Door Leaks NESHAP
STATUS: Re-proposal FY 89
CONTACT: OAQPS/ESD/SDB, Bill Harnett (919) 541-5253
CAS NO: CL-COE
CHEMICAL: COKE OVEN EMISSIONS
SOURCE: Coke Ovens, Wet-Coal Charged
PROJECT TYPE: NESHAP
DESCRIPTION: VOC's and other hazardous air pollutants are being studied as a whole set from coke oven emissions. The set of pollutants has been listed under Section 112 of the Clean Air Act. The project will also investigate the aspects of emission reduction.

CL-BIB-0018

TITLE: Asbestos NESHAP Revision
STATUS: Ongoing
CONTACT: OAQPS/ESD/PAB, Brenda Riddle (919) 541-5341
CAS NO: 1332-21-4
CHEMICAL: ASBESTOS
SOURCE: Construction Industry, Demolition
PROJECT TYPE: NESHAP
DESCRIPTION: Current NESHAP for asbestos and assessment of any new data for health and/or source assessment will be reviewed.

CL-BIB-0020

TITLE: Chromium NESHAP
STATUS: Ongoing
CONTACT: OAQPS/ESD/IPB, Jim Crowder (919) 541-5596
CAS NO: 7440-47-3
CHEMICAL: CHROMIUM
PROJECT TYPE: NESHAP
DESCRIPTION: The purpose of this project is to analyze and evaluate chromium emissions from chemical production facilities.

CL-BIB-0027

TITLE: EPA-State Pilot Project For the Control of Acrylonitrile Emissions
STATUS: Complete; report due 6/88
CONTACT: OAQPS/RPO, Fred Renner (919) 541-5556
CAS NO: 107-13-1
CHEMICAL: ACRYLONITRILE
PROJECT TYPE: Source Assessment, Risk Assessment
DESCRIPTION: Twenty-six facilities that use or produce acrylonitrile were studied. The study focused on the needs and recommendations for additional controls. This report will summarize those findings.

CL-BIB-0029

TITLE: Estimating Exposure to Arsenic, Beryllium, Cadmium, Chromium, and Nickel From Coal and Oil Combustion
STATUS: Ongoing
CONTACT: OAQPS/ESD/PAB, Warren Peters (919) 541-5337
CAS NO: 7440-38-2, 7440-41-7, 7440-43-9, 7440-47-3, 7440-02-0, CL-METAL
CHEMICAL: ARSENIC, BERYLLIUM, CADMIUM, CHROMIUM, NICKEL, METALLIC COMPOUNDS
SOURCE: Combustion
PROJECT TYPE: Exposure Assessment, Risk Assessment
DESCRIPTION: Public exposure and risks resulting from emissions of arsenic, beryllium, cadmium, chromium and nickel from coal and oil combustion sources will be estimated.

CL-BIB-0030

TITLE: Exposure/Risk Assessment on Air Emissions From Treatment, Storage and Disposal Facilities
STATUS: Ongoing
CONTACT: OAQPS/ESD/PAB, Mike Dusetzina (919) 541-5338
Fred Hauchman (919) 541-5339
Scott Voorhees (919) 541-5348
CAS NO: CL-HAZWAST
CHEMICAL: HAZARDOUS WASTES
SOURCE: Hazardous Waste Facilities
PROJECT TYPE: Exposure Assessment, Risk Assessment
DESCRIPTION: Exposure and risk analyses are being conducted for chemicals of concern emitted from treatment, storage, and disposal facilities.

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CL-BIB-0034

TITLE: Decision on Regulation of Acetaldehyde Under The Clean Air Act
STATUS: Ongoing
CONTACT: OAQPS/ESD/PAB, Scott Voorhees (919) 541-5348
CAS NO: 75-07-0
CHEMICAL: ACETALDEHYDE
PROJECT TYPE: Pre-Regulatory Assessment
DESCRIPTION: The EPA will use available source and health information to estimate potential public exposure and risks resulting from non-accidental air emissions of acetaldehyde from stationary sources. This analysis will be used to decide whether or not to conduct further analysis of acetaldehyde as a toxic air pollutant under the Clean Air Act to determine if Federal regulation is warranted.

CL-BIB-0035

TITLE: Decision on Regulation of Acrolein Under the Clean Air Act
STATUS: Ongoing
CONTACT: OAQPS/ESD/PAB, Brenda Riddle (919) 541-5341
CAS NO: 107-02-8
CHEMICAL: ACROLEIN
PROJECT TYPE: Pre-Regulatory Assessment
DESCRIPTION: The EPA will use available source and health information to estimate potential public exposure and risks resulting from non-accidental air emissions of acrolein from stationary sources. This analysis will be used to decide whether or not to conduct further analysis of acrolein as a toxic air pollutant under the Clean Air Act to determine if Federal regulation is warranted.

CL-BIB-0036

TITLE: Decision on Regulation of Ammonia Under the Clean Air Act
STATUS: Ongoing
CONTACT: OAQPS/ESD/PAB, Mike Dusetzina (919) 541-5338
CAS NO: 7664-41-7
CHEMICAL: AMMONIA
PROJECT TYPE: Pre-Regulatory Assessment
DESCRIPTION: The EPA will use available source and health information to estimate potential public exposure and risks resulting from non-accidental air emissions of ammonia from stationary sources. This analysis will be used to decide whether or not to conduct further analysis of ammonia as a toxic air pollutant under the Clean Air Act to determine if Federal regulation is warranted.

CL-BIB-0037

TITLE: Decision on Regulation of Chlorine and Hydrochloric Acid Under the Clean Air Act
STATUS: Ongoing
CONTACT: OAQPS/ESD/PAB, Tim Mohin (919) 541-5349
CAS NO: 7782-50-5, 7647-01-0
CHEMICAL: CHLORINE, HYDROCHLORIC ACID
PROJECT TYPE: Pre-Regulatory Assessment
DESCRIPTION: The EPA will use available source and health information to estimate potential public exposure and risks resulting from non-accidental air emissions of chlorine and hydrochloric acid drom stationary sources. This analysis will be used to decide whether or not to conduct further analysis of chlorine and hydrochloric acid as a toxic air pollutant under the Clean Air Act to determine if Federal regulation is warranted.

CL-BIB-0041

TITLE: Decision on Regulation of Gasoline Vapors Under the Clean Air Act
STATUS: Ongoing
CONTACT: OAQPS/ESD/PAB, Ila Cole (919) 541-5342
CAS NO: 8006-61-9
CHEMICAL: GASOLINE VAPORS
PROJECT TYPE: Pre-Regulatory Assessment
DESCRIPTION: The EPA will use available source and health information to estimate potential public exposure and risks resulting from non-accidental air emissions of gasoline vapors from stationary sources. This analysis will be used to decide whether or not to conduct further analysis of gasoline vapors as a toxic air pollutant under the Clean Air Act to determine if Federal regulation is warranted.

CL-BIB-0042

TITLE: Decision on Regulation of Hydrogen Sulfide Under the Clean Air Act
STATUS: Ongoing
CONTACT: OAQPS/ESD/PAB, Scott Voorhees (919) 541-5348
CAS NO: 7783-06-4
CHEMICAL: HYDROGEN SULFIDE
PROJECT TYPE: Pre-Regulatory Assessment
DESCRIPTION: The EPA will use available source and health information to estimate potential public exposure and risks resulting from non-accidental air emissions of hydrogen sulfide from stationary sources. This analysis will be used to decide whether or not to conduct further analysis of hydrogen sulfide as a toxic air pollutant under the Clean Air Act to determine if Federal regulation is warranted.

CL-BIB-0043

TITLE: Decision on Regulation of Mineral Fibers Under the Clean Air Act
STATUS: Ongoing
CONTACT: OAQPS/ESD/PAB, Brenda Riddle (919) 541-5341
CAS NO: CL-MINFIB
CHEMICAL: MINERAL FIBERS
PROJECT TYPE: Pre-Regulatory Assessment
DESCRIPTION: The EPA will use available source and health information to estimate potential public exposure and risks resulting from non-accidental air emissions of mineral fibers from stationary sources. This analysis will be used to decide whether or not to conduct further analysis of mineral fibers as a toxic air pollutant under the Clean Air Act to determine if Federal regulation is warranted.

CL-BIB-0046

TITLE: Decision on Regulation of Phosgene Under the Clean Air Act
STATUS: Ongoing
CONTACT: OAQPS/ESD/PAB, Dan Guth (919) 541-5340
CAS NO: 75-44-5
CHEMICAL: PHOSGENE
PROJECT TYPE: Pre-Regulatory Assessment
DESCRIPTION: The EPA will use available source and health information to estimate potential public exposure and risks resulting from non-accidental air emissions of phosgene from stationary sources. This analysis will be used to decide whether or not to conduct further analysis of phosgene as a toxic air pollutant under the Clean Air Act to determine if Federal regulation is warranted.

CL-BIB-0048

TITLE: Decision on Regulation of Propylene Oxide Under the Clean Air Act
STATUS: Ongoing
CONTACT: OAQPS/ESD/PAB, Nancy Pate (919) 541-5347
CAS NO: 75-56-9
CHEMICAL: PROPYLENE OXIDE
PROJECT TYPE: Pre-Regulatory Assessment
DESCRIPTION: The EPA will use available source and health information to estimate potential public exposure and risks resulting from non-accidental air emissions of propylene oxide from stationary sources. This analysis will be used to decide whether or not to conduct further analysis of propylene oxide as a toxic air pollutant under the Clean Air Act to determine if Federal regulation is warranted.

CL-BIB-0050

TITLE: Decision on Regulation of Air Emissions from Isocyanate Production Facilities
STATUS: Ongoing
CONTACT: OAQPS/ESD/PAB, Dan Guth (919) 541-5340
CAS NO: 584-84-9, 624-83-9, 95-80-7, 106-46-7, 75-44-5, 7647-01-0, 121-14-2
CHEMICAL: TOLUENE DIISOCYANATE, METHYL ISOCYANATE, TOLUENE DIAMINE, p-DICHLOROBENZENE, PHOSGENE, HYDROCHLORIC ACID, DINITROTOLUENE
PROJECT TYPE: Pre-Regulatory Assessment
DESCRIPTION: The EPA is collecting source and health information on air pollutants emitted from facilities producing toluene diisocyanate, methyl isocyanate, methyl bisphenyl diisocyanate, and other isocyanates. This information will be used to assess potential public risks resulting from exposure to multiple pollutants emitted from the same facility and to determine if Federal regulation of these sources is warranted.

CL-BIB-0052

TITLE: Decision on Regulation of Xylene Under the Clean Air Act
STATUS: Ongoing
CONTACT: OAQPS/ESD/PAB, Fred Hauchman (919) 541-5339
CAS NO: 1330-20-7
CHEMICAL: XYLENE
PROJECT TYPE: Pre-Regulatory Assessment
DESCRIPTION: The EPA will use available source and health information to estimate potential public exposure and risks resulting from non-accidental air emissions of xylene from stationary sources. This analysis will be used to decide whether or not to conduct further analysis of xylene as a toxic air pollutant under the Clean Air Act to determine if Federal regulation is warranted.

CL-BIB-0055

TITLE: Potential for Air Releases From CERCLA Sites
STATUS: Started 7/85; complete 5/88
CONTACT: OERR/ERD, Steve Caldwell (202) 382-4604
CAS NO: CL-HAZWAST
CHEMICAL: HAZARDOUS WASTES
SOURCE: Hazardous Waste Facilities, Spills, Etc.
PROJECT TYPE: Source Assessment
DESCRIPTION: This ongoing program is determining the potential for hazardous air releases from CERCLA cleanup sites.

CL-BIB-0059

TITLE: Health Assessment Document for Acrolein, External Review
STATUS: Complete; report due FY 89
CONTACT: OHEA/ECAO-RTP, William Ewald (919) 541-4164
CAS NO: 107-02-8
CHEMICAL: ACROLEIN
PROJECT TYPE: Health Assessment
DESCRIPTION: This document is one of a series of health assessment documents (HADs). It is a comprehensive assessment of the known health data, including carcinogenicity, mutagenicity, teratogenicity, and reproductive effects from all exposure routes on acrolein. The HADs serve as the scientific database for potential health effects and are used by the OAQPS to determine the possible listing of hazardous air pollutants under Section 111 and 112 of the Clean Air Act. The HAD report number will be EPA 600/8-86/014A.

CL-BIB-0061

TITLE: Health Assessment Document for Acetaldehyde, External Review
STATUS: Complete; report due FY 89
CONTACT: OHEA/ECAO-RTP, William Ewald (919) 541-4164
CAS NO: 75-07-0
CHEMICAL: ACETALDEHYDE
PROJECT TYPE: Health Assessment
DESCRIPTION: This document is one of a series of health assessment documents (HADs). It is a comprehensive assessment of the known health data, including carcinogenicity, mutagenicity, teratogenicity, and reproductive effects, from all exposure routes on acetaldehyde. The HADs serve as the scientific data base for potential health effects and are used by the OAQPS to determine the possible listing of hazardous air pollutants under Section 111 and 112 of the Clean Air Act. The HAD report number will be EPA 600/8-86/015A.

CL-BIB-0062

TITLE: Health Assessment Document for Hydrogen Sulfide, External Review
STATUS: Complete; report due FY 89
CONTACT: OHEA/ECAO-RTP, Harriet Ammann (919) 541-4930
CAS NO: 7783-06-4
CHEMICAL: HYDROGEN SULFIDE
PROJECT TYPE: Health Assessment
DESCRIPTION: This document is one of a series of health assessment documents (HADs). It is a comprehensive assessment of the known health data, including carcinogenicity, mutagenicity, teratogenicity, and reproductive effects, from all exposure routes on hydrogen sulfide. The HADs serve as the scientific database for potential health effects and are used by the OAQPS to determine the possible listing of hazardous air pollutants under Section 111 and 112 of the Clean Air Act. The HAD report number will be EPA 600/8-86/026A.

CL-BIB-0063

TITLE: Health Assessment Document for Phosgene, External Review
STATUS: Complete; report due FY 88
CONTACT: OHEA/ECAO-RTP, Darcy Campbell (919) 541-4477
CAS NO: 75-44-5
CHEMICAL: PHOSGENE
PROJECT TYPE: Health Assessment
DESCRIPTION: This document is one of a series of health assessment documents (HADs). It is a comprehensive assessment of the known health data, including carcinogenicity, mutagenicity, teratogenicity, and reproductive effects, from all exposure routes on phosgene. The HADs serve as the scientific database for potential health effects and are used by the OAQPS to determine the possible listing of hazardous air pollutants under Section 111 and 112 of the Clean Air Act. The HAD report number will be EPA 600/8-86/022A.

CL-BIB-0064

TITLE: Health Assessment Document for Polychlorinated Dibenzofurans
STATUS: Ongoing
CONTACT: OHEA/ECAO-CI, Debdas Mukerjee (513) 569-7572
CAS NO: 132-64-9
CHEMICAL: DIBENZOFURANS
PROJECT TYPE: Health Assessment
DESCRIPTION: This document is one of a series of health assessment documents (HADs). It is a comprehensive assessment of the known health data, including carcinogenicity, mutagenicity, teratogenicity, and reproductive effects, from all exposure routes on dibenzofurans. The HADs serve as the scientific data base for potential health effects and are used by the OAQPS to determine the possible listing of hazardous air pollutants under Section 111 and 112 of the Clean Air Act.

CL-BIB-0075

TITLE: Risk Analysis of Existing Data on Triethyl Phosphate
STATUS: Ongoing
CONTACT: OTS/ECAD/RAB, Larry Rosenstein (202) 382-3832
CAS NO: 78-40-0
CHEMICAL: TRIETHYL PHOSPHATE
PROJECT TYPE: Risk Assessment
DESCRIPTION: TEP is primarily used as an additive to polymeric resins to reduce viscosity, a flame retardant in polyester resins, and an ingredient in the production of tetraethyl pyrophosphate. TEP is being studied to assess the risks to humans. High levels of TEP can cause teratogenic effects in rats, but these levels would not be encountered in the workplace or by consumers using products containing TEP.

CL-BIB-0076

TITLE: Data Gathering and Risk Analysis of Existing Data on Dimethoxyethyl Phthalate and Other Phthalate Esters
STATUS: Ongoing
CONTACT: OTS/ECAD/RAB, Larry Rosenstein (202) 382-3832
CAS NO: 117-82-8, CL-PHTH
CHEMICAL: DIMETHOXYETHYL PHTHALATE
PROJECT TYPE: Risk Assessment
DESCRIPTION: This chemical category was originally recommended by the Interagency Testing Committee for environmental effects testing. However, a NTP bioassay indicated carcinogenic activity by di-2-ethylhexyl phthalate (DEHP), turning the focus to both health and environmental effects. Other authorities, apart from TSCA, are also interested in these esters. CMA has conducted tiered environmental and cancer-related (peroxisome induction studies) testing on certain esters, and has expressed interest in a rational, comprehensive regulatory treatment of the class. A toxicological Profile, mandated by section 110 of SARA, on DEHP has been completed and is now in the comment phase. The document is being produced in cooperation with ATSDR.

CL-BIB-0077

TITLE: Information Gathering and Risk Analysis of Existing Data on Phenylethanol and Phenylethanol Acetate
STATUS: Ongoing
CONTACT: OTS/ECAD/RAB, Larry Rosenstein (202) 382-3832
CAS NO: 60-12-8, 103-45-7
CHEMICAL: PHENYLETHANOL, PHENYLETHANOL ACETATE
PROJECT TYPE: Risk Assessment
DESCRIPTION: These chemicals are used interchangeably to produce fragrance materials in many consumer products and as flavor additives in many foods. They have been shown to be teratogenic in rats. Production volume is high and there is potential exposure to a large worker population during manufacture. These chemicals are being studied to assess the risks to humans.

CL-BIB-0079

TITLE: Risk Analysis of Existing Data on Phthalimide
STATUS: Ongoing
CONTACT: OTS/ECAD/RAB, Larry Rosenstein (202) 382-3832
CAS NO: 85-41-6
CHEMICAL: PHTHALIMIDE
PROJECT TYPE: Risk Assessment
DESCRIPTION: The chemical is used as an intermediate in the manufacture of dyes, pesticides, pigments, fungicides, and as laboratory reagents. Test data are being studied and have indicated that phthalimide may have developmental effects.

CL-BIB-0097

TITLE: Report on Advances in Analytical Methods for Identification and Quantitation of Organic Compounds in Air
STATUS: Ongoing
CONTACT: ORD/EMSL-RTP, Nancy Wilson (919) 541-4723
CAS NO: CL-ORGANIC
CHEMICAL: ORGANIC COMPOUNDS
PROJECT TYPE: Ambient Monitoring
DESCRIPTION: This report is one in a series that will result from chemicals being evaluated which are of specific interest to the regulatory programs in the Office of Toxic Substances. Chemometric and multivariant approaches to analytical instrument outputs will be developed. Sampling and analytical procedures used to identify and quantitate the presence of chemical compounds in chemical production processes in the environment and the biota will be assessed to meet regulatory needs.

CL-BIB-0102

TITLE: Non-Occupational Pesticide Exposure Study (NOPES)
STATUS: Ongoing; complete 11/88
CONTACT: ORD/EMSL-RTP, Andrew Bond (919) 541-3124
CAS NO: CL-PEST
CHEMICAL: PESTICIDES
PROJECT TYPE: Exposure Assessment
DESCRIPTION: This project is an extension of the Total Exposure Assessment Methodology (TEAM). The NOPES project is the first attempt to develop a methodology for measuring the exposures of the populace to pesticides, and, as in the other TEAM studies, it will seek to relate these exposures to actual use patterns. The NOPES study is a combination of methods development and data analysis.

CL-BIB-0103

TITLE: Atmospheric Measurements of Trace Hazardous Organic Chemicals
STATUS: Ongoing; report due 9/89
CONTACT: ORD/ASRL-RTP, Larry Cupitt (919) 541-2878
CAS NO: CL-ORGANIC
CHEMICAL: ORGANIC COMPOUNDS
PROJECT TYPE: Ambient Monitoring
DESCRIPTION: A Request For Proposal is out now. Plans are for work to begin in late summer 1988, with a report being published in September 1989. Ambient monitoring and analysis of hazardous organic compounds will be conducted.

CL-BIB-0104

TITLE: Hazardous Air Pollutants in the Urban Environment
STATUS: Ongoing
CONTACT: ORD/ASRL-RTP, Larry Cupitt (919) 541-2878
CAS NO: CL-VARIOUS
CHEMICAL: VARIOUS
PROJECT TYPE: Source Sampling, Source Assessment
DESCRIPTION: A variety of urban pollution sources (automobile exhaust, for example) are studied using smog chambers. This is not a methods development project. With the smog chambers, it is possible to study the photochemical changes that occur while producing mutagenic compounds. Bioassay studies are being done. The main purpose of this project is to identify the mutagenic compounds that are present in urban pollution sources.

CL-BIB-0108

TITLE: Determine Pulmonary Dose-Response Relationships
STATUS: Started 10/81; complete 9/92
CONTACT: OHR/HERL-RTP, Elaine Grose (919) 541-2966
CAS NO: CL-VARIOUS
CHEMICAL: HAZARDOUS AIR POLLUTANTS (PRIORITY)
PROJECT TYPE: Toxicity Testing
DESCRIPTION: The purpose of this program is to provide data on the inhalation effects of hazardous air pollutants on pulmonary, cardiovascular, and metabolic systems.

CL-BIB-0109

TITLE: Determine Neurotoxic Dose-Response Relationships
STATUS: Started 10/81; complete 9/92
CONTACT: OHR/HERL-RTP, Phillip Bushnell (919) 541-7747
CAS NO: CL-VARIOUS
CHEMICAL: HAZARDOUS AIR POLLUTANTS (PRIORITY)
PROJECT TYPE: Toxicity Testing
DESCRIPTION: Animal studies are being performed to provide dose-and-time effect data on the neurotoxicity of hazardous air pollutants.

CL-BIB-0110

TITLE: Characterize Genotoxic Dose-Response Relationships
STATUS: Started 10/79; complete 9/92
CONTACT: OHR/HERL-RTP, Joellen Lewtas (919) 541-3849
CAS NO: CL-VARIOUS
CHEMICAL: HAZARDOUS AIR POLLUTANTS (PRIORITY)
PROJECT TYPE: Toxicity Testing
DESCRIPTION: Animal studies are being performed to provide dose-response-metabolism and dosimetry data on the mutagenicity and carcinogenicity of hazardous air pollutants. A series of publications will be printed.

CL-BIB-0111

TITLE: Identify and Evaluate Toxic Components of Air Pollution
STATUS: Started 10/81; complete 9/92
CONTACT: OHR/HERL-RTP, Joellen Lewtas (919) 541-3849
CAS NO: CL-VARIOUS
CHEMICAL: HAZARDOUS AIR POLLUTANTS
PROJECT TYPE: Toxicity Testing, Ambient Monitoring
DESCRIPTION: The purpose of this program is to develop and validate methods to identify mutagenic and potentially carcinogenic components in ambient air and source emissions.

CL-BIB-0112

TITLE: Determine the Significance of Neurotoxic Response Indicators
STATUS: Started 10/81; complete 9/92
CONTACT: OHR/HERL-RTP, William Boyes (919) 541-7538
CAS NO: CL-VARIOUS
CHEMICAL: HAZARDOUS AIR POLLUTANTS
PROJECT TYPE: Toxicity Testing
DESCRIPTION: This program will conduct animal studies to determine the relationship of indicators of neurotoxicity to diseased states and/or neurobehavior dysfunction.

CL-BIB-0114

TITLE: Develop Methods to Identify Reproductive Toxicity of Air Pollutants
STATUS: Started 10/84; complete 9/92
CONTACT: OHR/HERL-RTP, John Laskey (919) 541-2782
CAS NO: CL-VARIOUS
CHEMICAL: VARIOUS
PROJECT TYPE: Toxicity Testing
DESCRIPTION: The purpose of this project is to develop and validate methods to identify potential teratogens and reproductive toxins in ambient air and source emissions.

CL-BIB-0115

TITLE: Integrated Air Cancer Project
STATUS: Started 10/84; complete 9/92
CONTACT: OHR/HERL-RTP, Joellen Lewtas (919) 541-3849
CAS NO: CL-CARCIN
CHEMICAL: CARCINOGENS
SOURCE: Combustion
PROJECT TYPE: Exposure Assessment
DESCRIPTION: The purpose of this project is to develop databases for identifying the major sources of airborne carcinogens and improve methodology for risk assessments and human exposure.

CL-BIB-0116

TITLE: Destruction of VOC/Hazardous Air Pollutant (HAP) Emissions via Catalytic Incineration
STATUS: Started 6/85; complete 6/89
CONTACT: ORD/AEERL, Mike Kosusko (919) 541-2991
CAS NO: CL-VOC, CL-VARIOUS
CHEMICAL: HAZARDOUS AIR POLLUTANTS, VOLATILE ORGANIC COMPOUNDS
PROJECT TYPE: Control Technology
DESCRIPTION: This project will study the catalytic destruction of hazardous air pollutants in a pilot plant laboratory. Analysis of the concentration of chlorinated hydrocarbons entering the incinerator will be performed. Also, the project will study oxidation potentials, and determine if any new hazardous air pollutants are being formed during catalytic destruction.

CL-BIB-0128

TITLE: Integrated Air Cancer Project: Wood Stove Operating Profiles
STATUS: Started 11/85; complete; report due FY 88
CONTACT: ORD/AEERL, Robert McCrillis (919) 541-2733
CAS NO: CL-WOOD,
CHEMICAL: WOOD SMOKE
SOURCE: Combustion
PROJECT TYPE: Source Assessment
DESCRIPTION: The field study was part of the IACP Boise, ID study. The use of the stove by the homeowners was the main concern with this project. Parameters were recorded such as stove temperature, wood type, etc. to review the impact these parameters had on ambient and indoor air emissions.

CL-BIB-0140

TITLE: Field Assessment of Steam VOC Removal Efficiencies
STATUS: Ongoing
CONTACT: ORP/HWERL-CI, Bryan Westfall (513) 569-7519
CAS NO: CL-HAZWAST; CL-VOC
CHEMICAL: HAZARDOUS WASTES, VOLATILE ORGANIC COMPOUNDS
SOURCE: Hazardous Waste Facilities
PROJECT TYPE: Source Assessment
DESCRIPTION: Steam stripping and VOC removal are being evaluated at aqueous hazardous waste facilities. Sampling and analyses of VOC, semivolatile compounds, and specific organics are being addressed.

CL-BIB-0141

TITLE: Field Assessment of Waste Pretreatment at Refinery Land Treatment Facilities
STATUS: Complete; report due 8/88
CONTACT: ORP/HWERL-CI, Bryan Westfall (513) 569-7519
CAS NO: CL-HAZWAST
CHEMICAL: HAZARDOUS WASTES
SOURCE: Hazardous Waste Facilities
PROJECT TYPE: Source Assessment
DESCRIPTION: This field study will assess the emissions from dewatering devices used to remove water from the sludge of land-treated waste. Sample analysis will be done for VOC, semi-VOC, and some specific compounds.

CL-BIB-0142

TITLE: Field Assessment of Fate of Organics in Aerated Treatment Systems
STATUS: Complete; report due FY 88
CONTACT: ORP/HWERL-CI, Lisa Brown (513) 569-7519
CAS NO: CL-HAZWAST, CL-ORGANIC
CHEMICAL: HAZARDOUS WASTES, ORGANIC COMPOUNDS
SOURCE: Hazardous Waste Facilities
PROJECT TYPE: Source Assessment
DESCRIPTION: Air emissions have been measured with an isolation flux chamber at two hazardous waste sites. Biodegradation studies were done at one hazardous waste site. The final report is in review now.

CL-BIB-0145

TITLE: Rhode Island Toxics Integration Project--Evaluation of Air Emissions from Sewage Treatment Plants
STATUS: Complete; report due FY 88
CONTACT: EPA Region I, Tom D'Avanzo (617) 565-3222
CAS NO: CL-ORGANICS, CL-METAL
CHEMICAL: ORGANIC COMPOUNDS, METALLIC COMPOUNDS
SOURCE: Sewage Treatment Plants
PROJECT TYPE: Source Assessment, Source Sampling
DESCRIPTION: Two sewage sludge incinerators were under study, one active and one under reconstruction. The active one was sampled, the other was evaluated using emission factors developed during the project. The sampling and evaluation phase is complete; the report is in the finalization stage.

CL-BIB-0146

TITLE: New York State Stack Sampling of Resource Recovery Plants
STATUS: Started 1984; complete; report due FY 88
CONTACT: EPA Region II, Robert Kelly (212) 264-2517
CAS NO: CL-DIOXIN, CL-METAL, 1336-36-3, CL-FURAN, 33857-28-2, 51207-31-9, 50-32-8, CL-PM, CL-VOC
CHEMICAL: DIOXINS, METALLIC COMPOUNDS, POLYCHLORINATED BIPHENYLS, FURANS, 2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN, 2,3,7,8-TETRACHLORODIBENZOFURAN, BENZO(A)PYRENE, PARTICULATE MATTER, VOLATILE ORGANIC COMPOUNDS
SOURCE: Resource Recovery Plants
PROJECT TYPE: Source Assessment, Source Sampling
DESCRIPTION: The project has two phases. The first is to perform stack sampling at six facilities -- one probe location. This has been completed. The second required sampling in more detail at two locations. Samples were taken before and after the control device and at start up and shut down. This phase was designed to look at the range of pollutant emissions.

CL-BIB-0147

TITLE: Analysis of Acid Precipitation Samples Collected in West Virginia, Delaware, and Maryland
STATUS: Ongoing
CONTACT: EPA Region III, Ted Erdman (215) 597-1193
CAS NO: CL-VARIOUS
CHEMICAL: VARIOUS
PROJECT TYPE: Source Sampling
DESCRIPTION: Wet and dry deposition are monitored at seven locations in MD, DE, and WV (2, 2, and 3 respectively) by the States. Data are submitted to the National Acid Deposition Databank. The project is a part of the National Acid Precipitation Assessment Program (NAPAP).

CL-BIB-0157

TITLE: Contra Costa Exposure Study
STATUS: Ongoing
CONTACT: EPA Region IX, Mike Stenburg (415) 974-8205
CAS NO: CL-ORGANIC, CL-METAL
CHEMICAL: VARIOUS ORGANICS, THREE METALS
PROJECT TYPE: Exposure Assessment, Ambient Monitoring, Dispersion Modeling
DESCRIPTION: The project goal is to evaluate the presence of 15-16 air toxics, three metals, the rest organics, in the Contra Costa area surrounding San Francisco. Phase I required development of an inventory, modeling and predicting air quality. This is complete and a draft report has been prepared. Phase II involves sampling three stations over one year to gather supplementary data.

CL-BIB-0159

TITLE: Pesticide Impact Study from Field and Slash Burning
STATUS: Started 1986; ongoing; report due FY 88
CONTACT: EPA Region X, Elizabeth Waddell (206) 442-8578
CAS NO: CL-PEST, CL-PM, CL-POM
CHEMICAL: PESTICIDES, PARTICULATE MATTER, POLYCYCLIC ORGANIC MATTER
SOURCE: Agricultural, Forestry
PROJECT TYPE: Source Assessment, Ambient Monitoring
DESCRIPTION: The sampling phase of the project is complete. The study evaluated the migration of herbicide residues and combustion products in smoke during burning of forests and agricultural areas pretreated with herbicides to desiccate harvest residues.

CL-BIB-0161

TITLE: Particulate and Tissue Analysis Service and Research
STATUS: Started 10/76; ongoing
CONTACT: NIOSH/DBBS/ABPB, Frank Platek (513) 533-8400
CAS NO: CL-VARIOUS
CHEMICAL: VARIOUS
PROJECT TYPE: Toxicity Testing
DESCRIPTION: This project will provide lung particulate burden data through the analysis of human lung tissues by automated analytical electron microscopy.

CL-BIB-0162

TITLE: Evaluation of Mesothelioma Production by Asbestos Substitutes
STATUS: Started 10/84; complete 9/90
CONTACT: NIOSH/DBBS/ABPB, Frank Platek (513) 533-8400
CAS NO: 1332-21-4, CL-VARIOUS
CHEMICAL: ASBESTOS, ASBESTOS SUBSTITUTES
PROJECT TYPE: Toxicity Testing
DESCRIPTION: This project will assess the safety of 2 modified chrysotile products through animal testing and safe substitutes for asbestos.

CL-BIB-0163

TITLE: Biomonitoring of Exposure to Coal Tar
STATUS: Started 10/83; complete 9/88
CONTRACT: NIOSH/DBBS/ABPB, William Tolos (513) 533-8433
CAS NO: 129-00-0, CL-VARIOUS
CHEMICAL: PYRENE, COAL TAR
PROJECT TYPE: Health Assessment
DESCRIPTION: This project will assess exposure to coal tar pitch, a complex mixture that is known to contain carcinogenic materials, using the biomonitoring method developed.

CL-BIB-0164

TITLE: Development and Evaluation of Biomonitoring Methods for Methyl Ethyl Ketone
STATUS: Started 9/85; ongoing FY 88
CONTRACT: NIOSH/DBBS/ABPB, Fred Phipps (513) 533-8433
CAS NO: 78-93-3
CHEMICAL: METHYL ETHYL KETONE
PROJECT TYPE: Health Assessment
DESCRIPTION: This project will identify the major urinary metabolites of MEK and establish how urinary levels of these metabolites relate to environmental levels.

CL-BIB-0165

TITLE: Behavioral Teratology of Alcohol Solvents
STATUS: Started 10/82; complete 9/88
CONTACT: NIOSH/DBBS/APEB, W.S. Brightwell (513) 533-8383
CAS NO: CL-SOLVENT
CHEMICAL: ALCOHOL SOLVENTS, SOLVENTS
PROJECT TYPE: Toxicity Testing
DESCRIPTION: This project will evaluate reproductive hazards of alcohol solvents using standard technological techniques and neurobehavioral indices of toxicity, and relate effects to chain-length features of the chemicals under test.

CL-BIB-0166

TITLE: Neurotoxicity of Aliphatic Carbon Solvents
STATUS: Started 10/83; complete 9/88
CONTACT: NIOSH/DBBS/APEB, John Russo (513) 533-8383
CAS NO: CL-SOLVENT
CHEMICAL: SOLVENTS
PROJECT TYPE: Toxicity Testing
DESCRIPTION: This project examines the relationship of aliphatic hydrocarbon chain length to the severity of behavioral effect in terms of rating potential neurotoxic hazards of this chemical class.

CL-BIB-0167

TITLE: Neurobehavioral Effects from Single/Mixed Spray Paint Agents
STATUS: Started 10/78; complete 6/88
CONTACT: NIOSH/DBBS/APEB, Robert Dick (513) 533-8383
CAS NO: CL-VARIOUS
CHEMICAL: PAINTS, KETONES
PROJECT TYPE: Toxicity Testing
DESCRIPTION: This project investigates neurobehavioral effects of acute exposures to Ketone solvents in human subjects and relates results to inadequacy of PELS and formulae for rating combination exposures.

CL-BIB-0168

TITLE: Neurotoxicity from Exposures to Heavy Metals
STATUS: Started 10/83; complete 12/89
CONTACT: NIOSH/DBBS/APEB, Kent Anger (513) 533-8383
CAS NO: 7440-43-9, CL-METAL
CHEMICAL: CADMIUM, HEAVY METALS
PROJECT TYPE: Toxicity Testing
DESCRIPTION: This project provides neurobehavioral assessment of workers in occupations or industries with chronic exposures to select heavy metals with known neurotoxic properties.

CL-BIB-0169

TITLE: Methodologies for Worksite Neurotoxicity
STATUS: Started 10/83; complete 9/88
CONTACT: NIOSH/DBBS/APEB, Kent Anger (513) 533-8383
CAS NO: CL-VARIOUS
CHEMICAL: VARIOUS
PROJECT TYPE: Toxicity Testing, Epidemiology Study
DESCRIPTION: This project provides an assessment of screening, diagnostic, and monitoring tests for behavioral/ neurological dysfunction to be used in worksite research and hazard assessment.

CL-BIB-0174

TITLE: Assessment of Cocarcinogenic Activity of Asphalt Fumes
STATUS: Started 10/82; complete 3/89
CONTACT: NIOSH/DBBS/ETB, Trent Lewis (513) 533-8392
CAS NO: 8052-42-4
CHEMICAL: ASPHALT
PROJECT TYPE: Toxicity Testing
DESCRIPTION: This project will identify the active components of asphalt fumes in order to develop industrial hygiene indicators for assessing exposure and ultimately reducing the carcinogenic risk.

CL-BIB-0175

TITLE: Inhalation Reproductive and Developmental Toxicity Testing
STATUS: Started 10/84; Complete 9/89
CONTACT: NIOSH/DBBS/ETB, Steven Schrader (513) 533-8392
CAS NO: CL-VARIOUS
CHEMICAL: VARIOUS
PROJECT TYPE: Toxicity Testing
DESCRIPTION: This project permits evaluation of reproductive and developmental toxicity of significant industrial chemicals using an occupationally relevant route of exposure and will provide response data over a range of concentrations from non-toxic to toxic for the exposed adult animals.

CL-BIB-0178

TITLE: Metabolism and Excretion Studies of Bis(2-Methoxyethyl) Ether (Diglyme)
STATUS: Started 10/84; ongoing
CONTACT: NIOSH/DBBS/ETB, Donald Richards (513) 533-8392
CAS NO: 111-96-6
CHEMICAL: BIS(2-METHOXYETHYL)ETHER
PROJECT TYPE: Toxicity Testing
DESCRIPTION: This project studies the metabolism of bis(2-methoxy-ethyl)ether, an aprotic glycol ether, to determine the mechanism of action of this compound and of similar compounds that exert testicular and embryonic toxicity.

CL-BIB-0181

TITLE: V205- NTP Chemical Manager
STATUS: Started 10/83; complete 9/90
CONTACT: NIOSH/DBBS/ETB, William Moorman (513) 533-8392
CAS NO: 1314-62-1
CHEMICAL: VANADIUM PENTOXIDE
PROJECT TYPE: Toxicity Testing
DESCRIPTION: Vanadium pentoxide was nominated to the NTP as a vanadium compound with significant potential for human exposure by NCI, OSHA, EPA, NIOSH, and MSHA. This project will provide NTP toxicological direction for acute and chronic information (organ function toxicity and cancer).

CL-BIB-0182

TITLE: In Vitro Tests for Workplace Carcinogens
STATUS: Started 10/80; complete 9/88
CONTACT: NIOSH/DBBS/ETB, Jeffery Bohrman (513) 533-8392
CAS NO: CL-CARCIN
CHEMICAL: VARIOUS
PROJECT TYPE: Toxicity Testing
DESCRIPTION: This project will result in the development and evaluation of the V79 cell matabolic cooperation assay as a screening test to determine the cocarcinogenic/tumor promoting potential of chemicals; each of the 2 contractors will conduct 42 metabolic cooperative assays.

CL-BIB-0186

TITLE: Dimethylformamide- NTP Chemical Manager
STATUS: Started 9/85; complete 2/92
CONTACT: NIOSH/DBBS/ETB, Trent Lewis (513) 533-8392
CAS NO: 68-12-2
CHEMICAL: DIMETHYLFORMAMIDE
PROJECT TYPE: Toxicity Testing
DESCRIPTION: Dimethyformamide was nominated by NIOSH for testing by the NTP on the basis of its high bioavailability, structural similarity to other suspect carcinogens, population at risk, and production volume. This project will provide toxicologic and carcinogenic data presently available.

CL-BIB-0188

TITLE: Semen Analysis in Animals, Longitudinal and Field Studies
STATUS: Started 10/84; complete 9/88
CONTACT: NIOSH/DBBS/ETB, Steven Schrader (513) 533-8392
CAS NO: CL-VARIOUS
CHEMICAL: VARIOUS
PROJECT TYPE: Toxicity Testing
DESCRIPTION: This project will evaluate the intra- and intervariation of semen characteristics using the longitudinal study of human semen characteristics. Methods of analysis of seminal parameters are being developed such as osmolarity, viscosity, and biochemical markers. Occupational field studies will evaluate potential of male reproductive hazards. The project will evaluate the data from the longitudinal study of human semen, participate in field surveys applying semen analysis methods, and investigate correlations between biochemical markers and semen quality.

CL-BIB-0189

TITLE: Evaluation of Drosophila for Teratogen Screening
STATUS: Started 10/81; complete 3/88
CONTACT: NIOSH/DBBS/ETB, Dennis Lynch (513) 533-8392
CAS NO: CL-VARIOUS
CHEMICAL: VARIOUS
PROJECT TYPE: Toxicity Testing
DESCRIPTION: This project will result in the development and evaluation of a test system using Drosophila melanogaster to screen chemicals for potential as mammalian teratogens; a total of 90 chemicals will be used in the study.

CL-BIB-0190

TITLE: Temporal Factors Influencing Carcinogenicity of Industrial Chemicals
STATUS: Started 10/85; complete 9/90
CONTRACT: NIOSH/DBBS/ETB, William Moorman (513) 533-8392
CAS NO: 75-21-8
CHEMICAL: ETHYLENE OXIDE
SOURCE: Chemical Industry
PROJECT TYPE: Toxicity Testing
DESCRIPTION: This project will obtain salient information on the importance of dose-rate of a suspect occupational carcinogen using a known rat carcinogen, ethylene oxide, which will be the representative chemical to study the influence of various exposure combinations of concentrations times time (C x T) on the carcinogenic potential.

CL-BIB-0192

TITLE: Byssinosis Prevention
STATUS: Started 10/81; ongoing
CONTACT: NIOSH/DRDS/CIB, Robert Castellan (304) 291-4223
CAS NO: CL-COTDUST
CHEMICAL: COTTON DUSTS
SOURCE: Textile Industry
PROJECT TYPE: Epidemiology Study, Toxicity Testing
DESCRIPTION: Data collection is complete. This project represents consultation to the government/industry/union task force for byssinosis prevention, as well as the reporting of existing data regarding the health risks of cotton dust environments. This information will be pertinent for future OSHA rulemaking concerning dust from cotton and other organic matter.

CL-BIB-0193

TITLE: Occupational Lung Disease Associated with Exposure to Diesel Emissions
STATUS: Started 10/81; ongoing
CONTACT: NIOSH/DRDS/ENIB, Michael McCawley (304) 291-4421
CAS NO: CL-DIESEL
CHEMICAL: DIESEL EXHAUST
PROJECT TYPE: Epidemiology Study
DESCRIPTION: This project will determine the levels of exposure to diesel emissions in coal mines and project doses for a 10-year medical follow-up of the cohort.

CL-BIB-0195

TITLE: Effective Silica Indices of Respirable Mineral Dusts
STATUS: Started 10/84; complete 9/88
CONTACT: NIOSH/DRDS/ENIB, William Wallace (304) 291-4136
CAS NO: 7631-86-9
CHEMICAL: SILICA
PROJECT TYPE: Source Sampling
DESCRIPTION: This project will determine the significance of the factors that affect the fibrogenic potential of silica. Present correlation of exposure is based on particle count or particle mass. This project will determine the most biologically effective index property for measurement.

CL-BIB-0198

TITLE: National Occupational Health Survey of Mining
STATUS: Started 10/82; complete 12/90
CONTACT: NIOSH/DRDS/ENIB, Donald Groce (304) 291-4474
CAS NO: CL-VARIOUS, 7631-86-9, 1332-21-4
CHEMICAL: VARIOUS, SILICA, ASBESTOS
SOURCE: Mining
PROJECT TYPE: Epidemiology Study
DESCRIPTION: This project will develop programs to collect and disseminate data on the workforce and their potential exposures to fibers, asbestos, silica, and various chemical exposure agents. The project will identify worker groups, jobs, and industries at risk from exposure to toxic substances or harmful physical agents.

CL-BIB-0199

TITLE: Micro-Organisms in Contaminated Office Buildings: Effects of Remedial Action
STATUS: Started 10/85; complete 9/89
CONTACT: NIOSH/DRDS/ENIB, Michael Peach (304) 291-4471
CAS NO: CL-ORGANIC, CL-IAP
CHEMICAL: AEROSOLS, ORGANIC COMPOUNDS, INDOOR AIR POLLUTANTS
PROJECT TYPE: Source Assessment, Indoor Air
DESCRIPTION: "In vitro" measurement systems will be used to assess levels of known antigenic agents to develop and determine the effectiveness of control strategies used in remedial actions. In addition, suspect antigens will be identified as potentially responsible for building-related disease outbreaks. Objectives are to determine microbial contamination in ventilation systems and assess the effectiveness of the remedial actions used. A report/publication will be issued.

CL-BIB-0202

TITLE: Prospective Epidemiologic Industrial Hygiene Study of Mild Steel Welders
STATUS: Started 10/85; complete 9/90
CONTACT: NIOSH/DRDS/EPIB, John Gamble (304) 291-4476
CAS NO: 1332-37-2, 1309-37-1, CL-WELD
CHEMICAL: IRON OXIDE, IRON OXIDE FUME, WELDING FUMES
SOURCE: Welding, Steel Industry
PROJECT TYPE: Epidemiology Study
DESCRIPTION: The welding study will evaluate the exposure-response relationship between welding contaminants and occupational lung disease.

CL-BIB-0207

TITLE: Study of Workers in the Dusty Trades in North Carolina - NCI
STATUS: Started FY 84; complete 9/89
CONTACT: NIOSH/DRDS/EPIB, Harlan Amandus (302) 291-4476
CAS NO: 7631-86-9, 1332-21-4
CHEMICAL: SILICA, ASBESTOS
PROJECT TYPE: Epidemiology Study
DESCRIPTION: Estimates of exposure-response relationships will be derived.

CL-BIB-0208

TITLE: Morbidity/Mortality Study of Sand Industry
STATUS: Started 10/83; complete 9/88
CONTACT: NIOSH/DRDS/EPIB, Harlan Amandus (304) 291-4476
CAS NO: 7631-86-9
CHEMICAL: SILICA
SOURCE: Sand Industry
PROJECT TYPE: Epidemiology Study
DESCRIPTION: This project will provide data to estimate exposure-response relationship and progression of silicosis.

CL-BIB-0211

TITLE: An Epidemiological Environmental Study of Workers in Office Buildings
STATUS: Started 10/85; complete 9/89
CONTACT: NIOSH/DRDS/EPIB, John Gamble (304) 291-4476
CAS NO: CL-IAP
CHEMICAL: VARIOUS, INDOOR AIR POLLUTANTS
PROJECT TYPE: Epidemiology Study, Indoor Air
DESCRIPTION; The morbidity study of office workers will determine the prevalence and incidence of health/comfort symptoms characteristic of office environments, the correlation of these symptoms with environmental conditions, and the effectiveness of different control measures.

CL-BIB-0213

TITLE: Mortality of Diesel Exposed Miners
STATUS: Started 10/85; complete 9/89
CONTACT: NIOSH/DRDS/EPIB, John Gamble (304) 291-4476
CAS NO: CL-DIESEL
CHEMICAL: DIESEL EXHAUST
SOURCE: Mining
PROJECT TYPE: Epidemiology Study
DESCRIPTION: This mortality study of miners exposed to diesel exhaust will determine the risk of lung cancer from exposure to diesel exhaust.

CL-BIB-0216

TITLE: Comparative Research in Analytical Pathology
STATUS: Started 10/71; ongoing
CONTACT: NIOSH/DRDS/LIB, James Tucker (304) 291-4474
CAS NO: CL-COTDUST
CHEMICAL: COTTON DUSTS
SOURCE: Coal Mining, Mining, Textile Industry
PROJECT TYPE: Epidemiology Study, Toxicity Testing
DESCRIPTION: The results obtained from the autopsy program and the disaster plan will aid in evaluating the effectiveness of the coal mine dust standard.

CL-BIB-0217

TITLE: Polycyclic Aromatic Hydrocarbons, Particulates and Lung Defense Mechanisms
STATUS: Started 10/85; complete 12/88
CONTACT: NIOSH/DRDS/LIB, Nicholas Nahon (303) 291-4474
CAS NO: 50-32-8, 1332-21-4, 7631-86-9
CHEMICAL: BENZO(A)PYRENE, ASBESTOS, SILICA, COAL DUST
SOURCE: Mining
PROJECT TYPE: Toxicity Testing
DESCRIPTION: The proposed experiments will investigate the effects of various organic industrial pollutants and their metabolites on the Interferon defense mechanisms of the lung.

CL-BIB-0218

TITLE: Alveolar Type II Cells: Effect of Silica
STATUS: Started 10/85; complete 9/88
CONTACT: NIOSH/DRDS/LIB, Jean Rabovsky (304) 291-4474
CAS NO: 7631-86-9
CHEMICAL: SILICA
SOURCE: Coal Mining
PROJECT TYPE: Toxicity Testing
DESCRIPTION: This project will determine the mechanistic differences in animals between acute and chronic silicosis and the effects of silica exposure on natural detoxification mechanisms of the lung.

CL-BIB-0221

TITLE: Mortality Study of Chemical Plants in Kanawha Valley, West Virginia
STATUS: Started 10/79; complete 9/90
CONTACT: NIOSH/DSHEFS/IWSB, Elizabeth Ward (513) 841-4203
CAS NO: 75-21-8, 624-83-9, 106-99-0
CHEMICAL: ETHYLENE OXIDE, METHYL ISOCYANATE, 1,3-BUTADIENE
SOURCE: Chemical Industry
PROJECT TYPE: Epidemiology Study
DESCRIPTION: This is a retrospective mortality study of 34,000 Union Carbide employees at three chemical plants in the Kanawha River Valley (KV) region of West Virginia. These plants have produced a large array of chemicals, many of which are used in the Union Carbide Texas City plants that have been associated with an excess risk of brain cancer among its employees. Initial analyses will attempt to test the apparent excess proportions of multiple myeloma and cancer of the brain and kidney at the KV plants. These excesses were revealed by a company-sponsored proportionate mortality study based on 819 deaths known to Union Carbide. One of the chemical exposures experienced by the KV workforce is ethylene oxide (ETO). Analyses of workers exposed to ETO and of other exposures of concern will be carried out via subcohort or case control designs.

CL-BIB-0223

TITLE: Mortality and Industrial Hygiene Study of Formaldehyde
STATUS: Started 10/80; complete 3/89
CONTACT: NIOSH/DSHEFS/IWSB, Leslie Stayner (513) 841-4203
CAS NO: 50-00-0
CHEMICAL: FORMALDEHYDE
PROJECT TYPE: Epidemiology Study
DESCRIPTION: This is a mortality study of garment workers who produce shirts from fabrics treated with formaldehyde resins. These fabrics continually release free formaldehyde resulting in occupational exposure to this chemical. This study is being conducted in two phases. The initial phase consists of proportional mortality ratio (PMR) analyses of 257 deaths from an insurance fund. The second phase consists of a retrospective and prospective cohort mortality study (SMR) of approximately 19,000 workers. In addition, industrial hygiene surveys of the plants included in the study and other industries with formaldehyde exposures are being conducted. Free formaldehyde from fabric treated in earlier years and of the particulates found in the work place of the garment workers will be analyzed.

CL-BIB-0224

TITLE: Ethylene Oxide Mortality Study - NCI
STATUS: Started 10/82; complete 9/90
CONTACT: NIOSH/DSHEFS/IWSB, Nelson Steenland (513) 841-4203
CAS NO: 75-21-8
CHEMICAL: ETHYLENE OXIDE
PROJECT TYPE: Epidemiology Study
DESCRIPTION: This is a cohort mortality study of workers who have been exposed to ethylene oxide in the course of sterilizing medical supplies or spices. The mortality experience of the cohort will be compared to that of the general population, stratified by age, race, sex, and calendar time. Further analysis by dose categories will be conducted to detect any dose-response. Exposure categorization will be based on existing industrial hygiene sampling data, new sampling data collected by NIOSH, and historial reconstruction based on process descriptions. The principal hypothesis to be tested is that exposure to ethylene oxide increases the risk of leukemia.

CL-BIB-0225

TITLE: Investigation of Workers Exposed to MBOCA
STATUS: Started 10/82; complete 9/88
CONTACT: NIOSH/DSHEFS/IWSB, Elizabeth Ward (513) 841-4203
CAS NO: 101-14-4
CHEMICAL: MBOCA, (CURENE)
PROJECT TYPE: Epidemiology Study
DESCRIPTION: The project consists of a cohort mortality and cancer incidence study. Personnel records of 540 workers exposed to MBOCA from 1968-1979 at an MBOCA production facility were filmed in 1981. Mortality follow-up has been ongoing since that time. Currently, a cancer incidence study which involves a telephone interview to determine whether cancer has been diagnosed and a medical screening examination (urine cytology and urinalysis) to detect new cases is planned. The telephone interview will also elicit a detailed work history, which will be used to evaluate degree of exposure and information about smoking habits. Since the latency for the population, about 10 years, is short for induction of bladder tumors by occupational carcinogens, there is a plan to follow up by recontacting the population at regular intervals after the initial interview and screening examination.

CL-BIB-0226

TITLE: Mortality of Dioxin Workers
STATUS: Started 10/79; complete 12/88
CONTACT: NIOSH/DSHEFS/IWSB, Marilyn Fingerhut (513) 841-4203
CAS NO: 95-95-4, 87-86-5, CL-DIOXIN
CHEMICAL: DIOXINS, 2,4,5-TRICHLOROPHENOL, PENTACHLOROPHENOL
PROJECT TYPE: Epidemiology Study
DESCRIPTION: This epidemiological study will assess the association between exposure to dioxin and the risk of developing cancer, especially soft tissue sarcoma. Records were collected for all U.S. workers who were identified as having worked in the production of dioxin-contaminated chemicals such as the herbicide 2,4,5-Trichlorophenoxyacetic acid (2,4,5-T), its feedstock 2,4,5-Trichlorophenol, and the wood preservative, pentachlorophenol. About 6,000 workers have been identified in 13 facilities throughout the U.S. Descriptions of the chemical processes and job conditions as well as industrial hygiene measurements and analyses of dioxin in products will be used to construct an exposure index for the population.

CL-BIB-0227

TITLE: Update of Completed Cohort Mortality Studies - NCI
STATUS: Started 10/82; ongoing
CONTACT: NIOSH/DSHEFS/IWSB, David Brown (513) 841-4203
CAS NO: 1336-36-3, 127-18-4, 100-42-5, 106-99-0, 71-43-2, 7440-43-9, 75-01-4, CL-PEST
CHEMICAL: POLYCHLORINATED BIPHENYLS (PCB), PERCHLOROETHYLENE, PESTICIDES, RUBBER, STYRENE, 1,3-BUTADIENE, BENZENE, CADMIUM, VINYL CHLORIDE
PROJECT TYPE: Epidemiology Study
DESCRIPTION: These are epidemiological studies that assess the association between exposure and the risk of developing disease (primarily cancer). Through this project, cohorts from previous NIOSH studies will be followed through the most current date possible, additional death information will be added to the file, the analysis will be rerun, and new reports will be prepared. Therefore, the reanalysis will include a greater number of deaths (increasing the statistical power) and the latency period will be extended five to ten years (depending on the individual study).

CL-BIB-0228

TITLE: Mortality and Industrial Hygiene Characteristics of Workers Exposed to Lead Chromate Paints - NCI
STATUS: Started 10/82; complete 9/89
CONTACT: NIOSH/DSHEFS/IWSB, James Walker (513) 841-4203
CAS NO: 7440-47-3, 7758-97-6
CHEMICAL: LEAD CHROMATE, CHROMIUM
PROJECT TYPE: Epidemiology Study
DESCRIPTION: This epidemiological study will assess the association between exposure to Lead Chromate paints and the risk of developing lung cancer. Retrospective cohort mortality and industrial hygiene studies will be conducted at four farm implement construction facilities. Vital status of study individuals will be ascertained through 1982. Death certificates will be obtained and coded according to the international classification of diseases in effect at the time of death. Standard life table analysis will be conducted using U.S. national rates for comparison. Historical exposures of painters to Lead Chromate will be estimated based on industrial hygiene records, engineering drawings, and histories of paint usage.

CL-BIB-0229

TITLE: Beryllium Retrospective Cohort Investigation - NCI
STATUS: Started 10/81; complete 9/89
CONTACT: NIOSH/DSHEFS/IWSB, Elizabeth Ward (513) 841-4203
CAS NO: 7440-41-7
CHEMICAL: BERYLLIUM
PROJECT TYPE: Epidemiology Study
DESCRIPTION: This investigation will examine the mortality experience of approximately 7,000 males employed at seven beryllium plants between 1940 and 1969. The study will be conducted in two phases, a retrospective cohort mortality study, and if warranted, nested case-control studies for lung cancer and nonmalignant respiratory disease. Personnel records will be used as the source of demographic and work history information. Standard life table analysis will be conducted using U.S. white males as the comparison population. The relationship between a possible excess in smoking among the cohort and any observed excess in lung cancer will be investigated using both theoretical modeling and a smoking survey of 1,600 of the cohort members in 1986.

CL-BIB-0230

TITLE: Medical, Biometric and Industrial Hygiene Study of Emerging Problems
STATUS: Started 10/79; ongoing
CONTACT: NIOSH/DSHEFS/IWSB, William Halperin (513) 841-4203
CAS NO: CL-VARIOUS
CHEMICAL: VARIOUS
PROJECT TYPE: Epidemiology Study
DESCRIPTION: The approach of this project generally will be to conduct literature searches and field surveys to collect information to determine if epidemiological studies (environmental, morbidity, and/or mortality) are feasible, and when feasible, to develop protocols as appropriate throughout the year and submit to the office of the director NIOSH, for approval. Requested assistance to other division or institute programs will be provided as required.

CL-BIB-0231

TITLE: Health Hazard Evaluations and Technical Assistance
STATUS: Started 10/80; ongoing
CONTACT: NIOSH/DSHEFS/IWSB, Robert Rinsky (513) 841-4382
CAS NO: CL-VARIOUS
CHEMICAL: VARIOUS
PROJECT TYPE: Epidemiology Study, Health Assessment
DESCRIPTION: This program will respond to hundreds of health hazard evaluation requests. They will work closely with State health departments and other NIOSH and CDC programs and will increase the dissemination of survey results.

CL-BIB-0232

TITLE: Epidemiologic and Industrial Hygiene Support of Toxic Substance Control Act - EPA
STATUS: Started 10/81; ongoing
CONTACT: NIOSH/DSHEFS/IWSB, Robert Herrick (513) 841-4203
CAS NO: 117-81-7, 75-21-8, 50-00-0, 101-14-4, CL-VARIOUS
CHEMICAL: DEHP, ETHYLENE OXIDE, MBOCA, FORMALDEHYDE, ORGANOTIN, GLYCOL ETHERS
PROJECT TYPE: Epidemiology Study, Health Assessment
DESCRIPTION: Chemicals will be selected for inclusion in this project based on the mutual interests of both NIOSH and the EPA. EPA suggests chemicals needing further evaluation prior to issuing regulations under the Toxic Substances Control Act. The evaluations will be conducted in three phases: I - A review of the toxic properties of the chemical and information on the number of exposed workers, production volume, uses of the chemical in the workplace, and names and descriptions of companies where the chemical is produced or used; II - Walk-through surveys conducted at companies that appear to be the most important for the extent of exposure evaluation and epidemiology feasibility assessment; III - The most appropriate companies will be selected for indepth industrial hygiene sampling surveys.

CL-BIB-0233

TITLE: Cohort Mortality Study of Antimony Smelter Workers
STATUS: Started 10/83; complete 12/88
CONTACT: NIOSH/DSHEFS/IWSB, Teresa Schnorr (513) 841-4203
CAS NO: 7440-36-0
CHEMICAL: ANTIMONY
SOURCE: Smelters
PROJECT TYPE: Epidemiology Study
DESCRIPTION: This epidemiological study will assess the association between exposure to antimony and the risk of developing lung cancer. A cohort of approximately 2,000 men employed from 1937 to 1971 in an antimony smelter were identified and their employment histories and demographic data coded into a master file. Vital status will be ascertained through SSA, IRS, Post Office, Bureau of Motor Vehicles, and a Case Location Service. Death certificates will be obtained and coded in the International Classification of Disease Revision in effect at the time of death. Standard Life Table Analysis will be conducted to determine if the cohort has experienced any excess mortality.

CL-BIB-0234

TITLE: Industrial Hygiene Characterization of 1,3-Butadiene Exposed Workers
STATUS: Started 10/84; complete 9/88
CONTACT: NIOSH/DSHEFS/IWSB, John Fajen (513) 841-4203
CAS NO: 106-99-0
CHEMICAL: 1,3-BUTADIENE
SOURCE: Chemical Industry
PROJECT TYPE: Exposure Assessment
DESCRIPTION: Walk through surveys will be conducted at all manufacturers of 1,3-Butadiene monomer and at a number of formulators and users of 1,3-Butadiene. In-depth surveys will be conducted at selected plants to obtain a comprehensive evaluation of worker exposure to 1,3-Butadiene. Air samples will be collected from the breathing zone of volunteers to determine the 8-hour (TWA) exposure to airborne 1,3-Butadiene. Area air sampling will also be performed throughout the plant to substantiate the results from the personal sampling.

CL-BIB-0236

TITLE: Morbidity and Reproductive Study of U.S. Chemical Workers
STATUS: Started FY 84; complete 9/90
CONTACT: NIOSH/DSHEFS/IWSB, Marie Sweeny (513) 841-4203
CAS NO: 1746-01-6, CL-DIOXIN
CHEMICAL: DIOXINS, 2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN
PROJECT TYPE: Epidemiology Study
DESCRIPTION: All living, locatable workers from two worksites within the dioxin registry (about 450 workers) will be matched to age, sex, and duration of residence with comparable individuals in the workers' current neighborhood. Physical examinations will be conducted and questionnaires used to obtain medical and exposure information. Questionnaires for workers and their spouses will be used to assess adverse reproductive outcomes. Logistic regression and other multivariate techniques will be utilized.

CL-BIB-0239

TITLE: Industrywide Study of Workers Exposed to 4,4'-Methylenedianiline (MDA)
STATUS: Started 10/84; complete 6/89
CONTACT: NIOSH/DSHEFS/IWSB, Mark Boeniger (513) 841-4203
CAS NO: 101-77-9
CHEMICAL: 4,4'- METHYLENEDIANILINE
PROJECT TYPE: Epidemiology Study
DESCRIPTION: This study will use several innovative techniques and new analytical methods to sample MDA. These new procedures will be compared to routine methods. Facilities using 4,4'-MDA will be identified through directories and contacts and visited by industrial hygienists and epidemiologists. Relevant data that describes the history of past and present use and factors which influence worker exposure to the compound will be gathered. Methods have been developed that will allow the determination of 4,4'MDA in the air, on surfaces, through skin contact and in urine of those who are exposed. Personnel records are being reviewed which should determine the feasibility of performing a retrospective mortality study of these workers.

CL-BIB-0240

TITLE: Retrospective Cohort Investigation of Non-Asbestos Welders
STATUS: Started 10/84; complete 9/89
CONTACT: NIOSH/DSHEFS/IWSB, Nelson Steenland (513) 841-4203
CAS NO: CL-WELD
CHEMICAL: WELDING FUMES
SOURCE: Steel Industry, Welding
PROJECT TYPE: Epidemiology Study
DESCRIPTION: NIOSH has identified a cohort of welders of mild steel who are not exposed to asbestos, nickel, or chromium. The principal exposure of these workers has been to iron oxide, a promoter of lung cancer in animals. A retrospective cohort mortality study of these mild steel welders will be conducted. Industrial hygiene measurements of the extent of exposure to welding fumes have been taken by management since the late 1960's. The use of a nonexposed cohort as a comparison group will enable the mortality experience of the welders to be compared to another group which is likely to share similar smoking habits. If a lung cancer excess is observed, a case-control study with smoking interviews will be conducted.

CL-BIB-0241

TITLE: Laryngeal Cancer in Workers Exposed to Sulfuric Acid
STATUS: Started 9/83; complete 3/88
CONTACT: NIOSH/DSHEFS/IWSB, Nelson Steenland (513) 841-4203
CAS NO: 7664-93-9
CHEMICAL: SULFURIC ACID
SOURCE: Steel Industry
PROJECT TYPE: Epidemiology Study
DESCRIPTION: This epidemiological study will assess the association between exposure to sulfuric acid and the risk of developing laryngeal cancer.

CL-BIB-0242

TITLE: Case-Control Study of Lung Cancer in Teamsters Union
STATUS: Started 10/83; complete 9/89
CONTACT: NIOSH/DSHEFS/IWSB, Nelson Steenland (513) 841-4203
CAS NO: CL-DIESEL
CHEMICAL: DIESEL EXHAUST
SOURCE: Mobile Sources
PROJECT TYPE: Epidemiology Study
DESCRIPTION: This epidemiological study will assess the association between lung cancer in teamsters and exposures, especially to diesel exhaust. Bladder cancer also will be evaluated. A case-control study of lung cancer in the Teamsters Union will be conducted. Cases are 1,500 lung cancer deaths among long-term teamsters in the central states region during 1982-1983. Controls are 1,500 other deaths. Smoking data will be sought from next-of-kin. Cases will be compared with controls to calculate odds ratios for lung cancer due to working as a truck driver versus other jobs in the Union. Additionally, levels of exposure to diesel fumes will be estimated and odds ratios for diesel exposure will be calculated. All analyses will include control for smoking.

CL-BIB-0243

TITLE: Cohort Mortality Study of Toluene Diisocyanate Exposed Workers
STATUS: Started 6/83; complete 6/89
CONTACT: NIOSH/DSHEFS/IWSB, Teresa Schnorr (513) 841-4203
CAS NO: 26471-62-5
CHEMICAL: TOLUENE DIISOCYANATE
PROJECT TYPE: Epidemiology Study
DESCRIPTION: This study will assess the association between exposure to toluene diisocyanate and the risk of developing respiratory cancer. A cohort of approximately 8,000 men and women employed at four different polyurethane foam manufacturing plants between 1958 and 1982 have been identified. Their employment histories and demographic data will be entered into a master file, and their vital status determined through follow-up with SSA, IRS, Post Office, Bureau of Motor Vehicles and a private Case-Location Service. Death certificates will be obtained from the appropriate states and the underlying cause of death coded according to the International Classification of Disease Revision in effect at the time of death. Standard life table analysis will be conducted to determine if the cohort has experienced excess mortality.

CL-BIB-0244

TITLE: Uranium Miners-Low Dose Investigation
STATUS: Started 10/82; complete 9/89
CONTACT: NIOSH/DSHEFS/IWSB, Robert Roscoe (513) 841-4203
CAS NO: 10043-92-2, CL-VARIOUS
CHEMICAL: RADON, VARIOUS
SOURCE: Uranium Mines; Mining
PROJECT TYPE: Epidemiology Study
DESCRIPTION: This project consists of two components: (1) A questionnaire survey of all living miners and the next-of-kin of miners who died after 1965. The questionnaire is designed to collect data concerning occupational exposures, smoking history, medical history and diet. (2) After updating the computer files with the questionnaire data and the vital status data as of 1985, a cohort mortality analysis will be performed on the 4,140 cohort members. Mortality analyses will also be performed on various subcohorts based on exposure, smoking, dietary and racial categories.

CL-BIB-0247

TITLE: Case-Control Mortality Study of Nitroglycerin-Exposed Workers
STATUS: Started 10/84; complete 9/89
CONTACT: NIOSH/DSHEFS/IWSB, Leslie Stayner (513) 841-4203
CAS NO: 55-63-0
CHEMICAL: NITROGLYCERIN
SOURCE: Dynamite, Chemical Industry
PROJECT TYPE: Epidemiology Study
DESCRIPTION: A case-control study will be conducted with cases consisting of Cardiovascular Disease (CVD) deaths among a plant population and the controls consisting of plant workers not dying of CVD. The primary risk factor to be investigated will be occupational exposure to nitroglycerin. Other study variables that will be considered include sex, race, age, smoking history, and work assignment restrictions based on periodic CVD examinations conducted by the company. The analytical method will be a form of regression analysis.

CL-BIB-0252

TITLE: Access to National Occupational Hazard Survey Data Base Profile Development
STATUS: Started 10/78; ongoing
CONTACT: NIOSH/DSHEFS/SB, Joseph Seta (513) 841-4303
CAS NO: CL-VARIOUS
CHEMICAL: VARIOUS
PROJECT TYPE: Epidemiology Study
DESCRIPTION: Trend analyses for the period spanned by NOSH (1972-74) and NOES will be accomplished by comparing key variables common to both surveys.

CL-BIB-0253

TITLE: Surveillance Cooperative Agreements Between NIOSH and States (SCAN)
STATUS: Started 10/79; ongoing
CONTACT: NIOSH/DSHEFS/SB, Nina Lalich (513) 841-4303
CAS NO: CL-VARIOUS
CHEMICAL: VARIOUS
PROJECT TYPE: Epidemiology Study
DESCRIPTION: This project tests the ability of states to develop and maintain occupational health and safety surveillance programs through information exchange and routine occupational health data submissions.

CL-BIB-0254

TITLE: Acrolein Emissions Update
STATUS: Ongoing
CONTACT: OAQPS/ESD/CPB, Dave Beck (919) 541-5421
CAS NO: 107-02-8
CHEMICAL: ACROLEIN
SOURCE: Chemical Plants
PROJECT TYPE: Emission Factors
DESCRIPTION: Acrolein emissions data will be reviewed and updated. A survey and Section 114 letters have been mailed to facilities that produce or use acrolein.

CL-BIB-0256

TITLE: Acetaldehyde Preliminary Source Assessment
STATUS: Ongoing
CONTACT: OAQPS/ESD/CPB, Scott Voorhees (919) 541-5348
CAS NO: 75-07-0
CHEMICAL: ACETALDEHYDE
SOURCE: Combustion Sources-esp. Woodburning
PROJECT TYPE: Source Assessment
DESCRIPTION: Available source information will be used to estimate the potential for emissions of acetaldehyde from combustion sources.

CL-BIB-0257

TITLE: Engineering Study: Standards Development for Hazardous Waste Treatment, Storage, and Disposal Facilities
STATUS: Started 10/79; Complete 2/99
CONTACT: OAQPS/ESD/CPB, Kent Hustvedt (919) 541-5395
CAS NO: CL-HAZWAST, 75-07-0, CL-VOC, 75-44-5, 7440-43-9
CHEMICAL: HAZARDOUS WASTE, ACETALDEHYDE, VOLATILE ORGANIC COMPOUNDS, PHOSGENE, CADMIUM
SOURCE: Hazardous Waste Treatment, Storage, and Disposal Facilities
PROJECT TYPE: Pre-Regulatory Assessment, NESHAP Development, Emission Factor, Control Technology
DESCRIPTION: The purpose of this project is to analyze the effects of organic air emissions from RCRA permitted hazardous waste treatment, storage, and disposal facilities. Regulatory options will be studied, and standards proposed.

CL-BIB-0261

TITLE: Hazardous Organic NESHAP
STATUS: Proposed 10/89
CONTACT: OAQPS/ESED/SDB, Doug Bell (919) 541-5778
CAS NO: 106-99-0, 75-09-2, 127-18-4, 79-01-6, 56-23-5 67-66-3, 107-06-2, 75-21-8
CHEMICAL: BUTADIENE,1,3-, METHYLENE CHLORIDE PERCHLOROETHYLENE, TRICHLOROETHYLENE, CARBON TETRACHLORIDE, CHLOROFORM, ETHYLENE DICHLORIDE, ETHYLENE OXIDE
PROJECT TYPE: NESHAP
DESCRIPTION: This NESHAP will control process vent and fugitive emissions of eight pollutants at chemical production facilities. The NESHAP is scheduled for proposal in October 1989, and promulgation in December 1990.

CL-BIB-0264

TITLE: Decision on Regulation of Hydrocyanic Acid Under the Clean Air Act
STATUS: Ongoing
CONTACT: OAQPS/ESD/PAB, Brenda Riddle (919) 541-5341
CAS NO: 74-90-8
CHEMICAL: HYDROCYANIC ACID
PROJECT TYPE: Pre-Regulatory Assessment
DESCRIPTION: The EPA will use available source and health information to estimate potential public exposure and risks resulting from non-accidental air emissions of hydrocyanic acid from stationary sources. This analysis will be used to decide whether or not to conduct further analysis of hydrocyanic acid as a toxic air pollutant under the Clean Air Act to determine if Federal regulation is warranted.

CL-BIB-0265

TITLE: Decision on Regulation of Propylene Under the Clean Air Act
STATUS: Ongoing
CONTACT: OAQPS/ESD/PAB, Nancy Pate (919) 541-5347
CAS NO: 115-07-1
CHEMICAL: PROPYLENE
PROJECT TYPE: Pre-Regulatory Assessment
DESCRIPTION: The EPA will use available source and health information to estimate potential public exposure and risks resulting from non-accidental air emissions of propylene from stationary sources. This analysis will be used to decide whether or not to conduct further analysis of propylene as a toxic air pollutant under the Clean Air Act to determine if Federal regulation is warranted.

CL-BIB-0267

TITLE: Decision on Regulation of Phosphorus Under the Clean Air Act
STATUS: Ongoing
CONTACT: OAQPS/ESD/PAB, Scott Voorhees (919) 541-5348
CAS NO: 7723-14-0
CHEMICAL: PHOSPHORUS
PROJECT TYPE: Pre-Regulatory Assessment
DESCRIPTION: The EPA will use available source and health information to estimate potential public exposure and risks resulting from non-accidental air emissions of phosphorus from stationary sources. This analysis will be used to decide whether or not to conduct further analysis of phosphorus as a toxic air pollutant under the Clean Air Act to determine if Federal regulation is warranted.

CL-BIB-0268

TITLE: Decision on Regulation of Ethyl Chloride Under the Clean Air Act
STATUS: Ongoing
CONTACT: OAQPS/ESD/PAB, Bob Schell (919) 541-5519
CAS NO: 75-00-3
CHEMICAL: CHLOROETHANE
PROJECT TYPE: Pre-Regulatory Assessment
DESCRIPTION: The EPA will use available source and health information to estimate potential public exposure and risks resulting from non-accidental air emissions of ethyl chloride from stationary sources. This analysis will be used to decide whether or not to conduct further analysis of ethyl chloride as a toxic air pollutant under the Clean Air Act to determine if Federal regulation is warranted.

CL-BIB-0269

TITLE: Decision on Regulation of Dimethylamine Under the Clean Air Act
STATUS: Ongoing
CONTACT: OAQPS/ESD/PAB, Dan Guth (919) 541-5340
CAS NO: 124-40-3
CHEMICAL: DIMETHYLAMINE
PROJECT TYPE: Pre-Regulatory Assessment
DESCRIPTION: The EPA will use available source and health information to estimate potential public exposure and risks resulting from non-accidental air emissions of dimethylamine from stationary sources. This analysis will be used to decide whether or not to conduct further analysis of dimethylamine as a toxic air pollutant under the Clean Air Act to determine if Federal regulation is warranted.

CL-BIB-0270

TITLE: Decision on Regulation of Selenium and Its Compounds Under the Clean Air Act
STATUS: Ongoing
CONTACT: OAQPS/ESD/PAB, Ila Cote (919) 541-5342
CAS NO: 7782-49-2
CHEMICAL: SELENIUM, SELENIUM COMPOUNDS
PROJECT TYPE: Pre-Regulatory Assessment
DESCRIPTION: The EPA will use available source and health information to estimate potential public exposure and risks resulting from non-accidental air emissions of selenium from stationary sources. This analysis will be used to decide whether or not to conduct further analysis of selenium as a toxic air pollutant under the Clean Air Act to determine if Federal regulation is warranted.

CL-BIB-0271

TITLE: Decision on Regulation of Phthalic Anhydride Under the Clean Air Act
STATUS: Ongoing
CONTACT: OAQPS/ESD/PAB, Fred Hauchman (919) 541-5339
CAS NO: 85-44-9
CHEMICAL: PHTHALIC ANHYDRIDE
PROJECT TYPE: Pre-Regulatory Assessment
DESCRIPTION: The EPA will use available source and health information to estimate potential public exposure and risks resulting from non-accidental air emissions of phthalic anhydride from stationary sources. This analysis will be used to decide whether or not to conduct further analysis of phthalic anhydride as a toxic air pollutant under the Clean Air Act to determine if Federal regulation is warranted.

CL-BIB-0272

TITLE: Decision on Regulation of Sodium Hydroxide Under the Clean Air Act
STATUS: Ongoing
CONTACT: OAQPS/ESD/PAB, Tim Mohin (919) 541-5349
CAS NO: 1310-73-2
CHEMICAL: SODIUM HYDROXIDE
PROJECT TYPE: Pre-Regulatory Assessment
DESCRIPTION: The EPA will use available source and health information to estimate potential public exposure and risks resulting from non-accidental air emissions of sodium hydroxide from stationary sources. This analysis will be used to decide whether or not to conduct further analysis of sodium hydroxide as a toxic air pollutant under the Clean Air Act to determine if Federal regulation is warranted.

CL-BIB-0276

TITLE: Decision on Regulation of Maleic Anhydride Under the Clean Air Act
STATUS: Ongoing
CONTACT: OAQPS/ESD/PAB, Fred Hauchman (919) 541-5339
CAS NO: 108-31-6
CHEMICAL: MALEIC ANHYDRIDE
PROJECT TYPE: Pre-Regulatory Assessment
DESCRIPTION: The EPA will use available source and health information to estimate potential public exposure and risks resulting from non-accidental air emissions of maleic anhydride from stationary sources. This analysis will be used to decide whether or not to conduct further analysis of maleic anhydride as a toxic air pollutant under the Clean Air Act to determine if Federal regulation is warranted.

CL-BIB-0277

TITLE: Decision on Regulation of Mercuric Chloride Under the Clean Air Act
STATUS: Ongoing
CONTACT: OAQPS/ESD/PAB, Ray Morrison (919) 541-5330
CAS NO: 7487-94-7
CHEMICAL: MERCURIC CHLORIDE
PROJECT TYPE: Pre-Regulatory Assessment
DESCRIPTION: The EPA will use available source and health information to estimate potential public exposure and risks resulting from non-accidental air emissions of mercuric chloride from stationary sources. This analysis will be used to decide whether or not to conduct further analysis of mercuric chloride as a toxic air pollutant under the Clean Air Act to determine if Federal regulation is warranted.

CL-BIB-0278

TITLE: Decision on Regulation of Methanol Under the Clean Air Act
STATUS: Ongoing
CONTACT: OAQPS/ESD/PAB, Ila Cole (919) 541-5342
CAS NO: 67-56-1
CHEMICAL: METHANOL
PROJECT TYPE: Pre-Regulatory Assessment
DESCRIPTION: The EPA will use available source and health information to estimate potential public exposure and risks resulting from non-accidental air emissions of methanol from stationary sources. This analysis will be used to decide whether or not to conduct further analysis of methanol as a toxic air pollutant under the Clean Air Act to determine if Federal regulation is warranted.

CL-BIB-0279

TITLE: Health Assessment for Chromium, Update
STATUS: Ongoing
CONTACT: OHEA/ECAO-RTP, Robert Elias (919) 541-4167
CAS NO: 7440-47-3
CHEMICAL: CHROMIUM
PROJECT TYPE: Health Assessment
DESCRIPTION: This document is one of a series of health assessment documents (HADs). It is a comprehensive assessment of the known health data, including carcinogenicity, mutagenicity, teratogenicity, and reproductive effects, from all the exposure routes on chromium. The HADs serve as the scientific data base for potential health effects and are used by the OAQPS to determine the possible listing of hazardous air pollutants under Section 111 and 112 of the Clean Air Act. The HAD report number will be EPA 600/8-87-048F.

CL-BIB-0280

TITLE: Health Assessment Document for Chlorine and Hydrogen Chloride, External Review
STATUS: Ongoing
CONTACT: OHEA/ECAO-RTP, Beverly Comfort (919) 541-4165
CAS NO: 7782-50-5, 7647-01-0
CHEMICAL: CHLORINE, HYDROGEN CHLORIDE
PROJECT TYPE: Health Assessment
DESCRIPTION: This document is one of a series of health assessment documents (HADs). It is a comprehensive assessment of the known health data, including carcinogenicity, mutagenicity, teratogenicity, and reproductive effects, from all exposure routes on chlorine and hydrogen chloride. The HADs serve as the scientific data base for potential health effects and are used by the OAQPS to determine the possible listing of hazardous air pollutants under Section 111 and 112 of the Clean Air Act. The HAD report number will be EPA 600/8-87/041A.

CL-BIB-0281

TITLE: Development of Methods to Interpret Metabolism Data
STATUS: Complete; report due FY 88
CONTACT: OHEA/EAG, Richard Walentowicz (202) 475-8922
PROJECT TYPE: Exposure Assessment, Toxicity Testing
DESCRIPTION: Pharmacokinetics data are being studied to determine exposure assessments.

CL-BIB-0282

TITLE: Health Assessment for Trichloroethylene Cancer Update
STATUS: Ongoing
CONTACT: OHEA/CAG, Charlie Ris (202) 382-5952
CAS NO: 79-01-6
CHEMICAL: TRICHLOROETHYLENE
PROJECT TYPE: Health Assessment
DESCRIPTION: A comprehensive assessment of the known health data for carcinogenicity from all exposure routes on trichloroethylene is being studied.

CL-BIB-0283

TITLE: Chemical Hazard Information Profile for Methyl Carbamate
STATUS: Ongoing
CONTACT: OTS/ECAD/CSB, John Leitzke (202) 382-3507
CAS NO: 598-55-0
CHEMICAL: METHYL CARBAMATE
PROJECT TYPE: CHIP
DESCRIPTION: A summary of readily available information is presented on the following areas: production, use, environmental releases and fate, exposure information from monitoring, human health concerns, clinical and laboratory animal studies, and regulatory status.

CL-BIB-0284

TITLE: Chemical Hazard Information Profile for Benzotriazole-Based UV Light Stabilizers
STATUS: Ongoing
CONTACT: OTS/ECAD/CSB, John Leitzke (202) 382-3507
CAS NO: 95-14-7, CL-VARIOUS
CHEMICAL: BENZOTRIAZOLE COMPOUNDS
SOURCE: UV Light Stabilizers
PROJECT TYPE: CHIP
DESCRIPTION: A summary of readily available information is presented on the following areas: production, use, environmental releases and fate, exposure information from monitoring, human health concerns, clinical and laboratory animal studies, and regulatory status.

CL-BIB-0285

TITLE: Chemical Hazard Information Profile for Piperidinyl-Based UV Light Stabilizers
STATUS: Ongoing
CONTACT: OTS/ECAD/CSB, John Leitzke (202) 382-3507
CAS NO: 1893-33-0, CL-VARIOUS
CHEMICAL: PIPERIDINYL COMPOUNDS
SOURCE: UV Light Stabilizers
PROJECT TYPE: CHIP
DESCRIPTION: A summary of readily available information is presented on the following areas: production, use, environmental releases and fate, exposure information from monitoring, human health concerns, clinical and laboratory animal studies, and regulatory status.

CL-BIB-0286

TITLE: Toxics Air Monitoring Systems (TAMS)
STATUS: Ongoing; complete FY 91
CONTACT: ORD/EMSL-RTP, Gary Evans (919) 541-3124
CAS NO: CL-VOC
CHEMICAL: VOLATILE ORGANIC COMPOUNDS
PROJECT TYPE: Ambient Monitoring
DESCRIPTION: TAMS is a pilot scale network to develop and evaluate methods for sample collection and analysis for ambient air toxics. This project is the program development for TAMS. The TAMS efforts are carried out through coordination of this project.

CL-BIB-0287

TITLE: Analytical Methods Development for Toxic Substances
STATUS: Started 10/80; complete 12/99
CONTACT: ORD/EMSL-RTP, Robert Lee (919) 541-2454
CAS NO: CL-WOOD, CL-PM
CHEMICAL: WOOD SMOKE, PARTICULATE MATTER
SOURCE: Automotive Exhaust, Urban Particulate Matter, Wood Smoke
PROJECT TYPE: Ambient Monitoring, Source Sampling
DESCRIPTION: Analytical methods are being developed for qualitative and quantitative analysis of non-volatile and semi-volatile compounds from environmental samples. The work will concentrate on matrix isolation GC infra-red spectrometry. Chemicals will be evaluated which are of specific interest to the regulatory programs in the Office of Toxic Substances. Chemometric and multi-variant approaches to analytical instrument outputs will be developed.

CL-BIB-0288

TITLE: Development of Ambient Methods for Hazardous Waste
STATUS: Started 10/82; complete 12/90
CONTACT: ORD/EMSL-RTP, Robert Lee (919) 541-2454
CAS NO: CL-HAZWAST, CL-VOC
CHEMICAL: HAZARDOUS WASTE, VOLATILE ORGANIC COMPOUNDS
PROJECT TYPE: Ambient Monitoring
DESCRIPTION: This project is developing methods for the analysis of 11 VOCs using a portable gas chromatograph in the field. Also, canister technology will be addressed for the quantitative analysis of 41 VOCs.

CL-BIB-0289

TITLE: Methods Development for Sampling Hazardous Waste Emissions from Stacks
STATUS: Started 10/86; complete 9/88
CONTACT: ORD/EMSL-RTP, Rodney Midgett (919) 541-2196
CAS NO: CL-HAZWAST
CHEMICAL: HAZARDOUS WASTE
PROJECT TYPE: Source Sampling
DESCRIPTION: Several tasks are included in this project, including the sampling of semi-volatiles, volatiles, toxic metals, HCl, and CO. Generally, methods are being developed to evaluate field testing procedures. Statistical analyses are being done to determine accuracy and precision of the methods.

CL-BIB-0290

TITLE: Indoor Air Quality Research
STATUS: Started 10/86; complete 9/90
CONTACT: ORD/EMSL-RTP, Charles Rodes (919) 541-3079
CAS NO: CL-IAP
CHEMICAL: INDOOR AIR POLLUTANTS
PROJECT TYPE: Indoor Air, Source Assessment, Exposure Assessment, Health Assessment
DESCRIPTION: Field studies will begin in FY 88. This project will study methods for sample collection and analysis for indoor air pollutants of residential, office, and commercial buildings. The main purpose of this project is program management of modeling, measurement, and monitoring. A status report will be published in 1990.

CL-BIB-0291

TITLE: Monitoring Human Exposure to Hazardous Air Pollutants (HAPs)
STATUS: Started 10/82; complete 12/89
CONTACT: ORD/EMSL-RTP, Ross Highsmith (919) 541-7828
CAS NO: CL-VARIOUS
CHEMICAL: VARIOUS, HAZARDOUS AIR POLLUTANTS
PROJECT TYPE: Exposure Assessment
DESCRIPTION: Sampling procedures are being developed to monitor human exposure to a variety of compounds; for instance, nicotine has been sampled and analyzed, as well as metals and VOCs.

CL-BIB-0292

TITLE: Dioxin Analysis of Hospital Incinerator Ash
STATUS: Started 7/87; ongoing
CONTACT: EPA Region I, Margaret McDonough (617) 565-3231
CAS NO: CL-DIOXIN, CL-FURAN
CHEMICAL: DIOXINS, FURANS
SOURCE: Hospitals, Incinerators
PROJECT TYPE: Source Assessment
DESCRIPTION: Sampling of bottom ash and fly ash at four hospital incinerators has been completed. Analyses for dioxins and furans were made to assess the potential for dioxin and furan emissions from the stack. Document is in preparation.

CL-BIB-0296

TITLE: Process Evaluation of Ambient Air Monitoring Near a Sugar Beet Processing Plant in Idaho
STATUS: Started FY 86; ongoing
CONTACT: EPA Region X, John Schweiss (206) 442-1757
CAS NO: 50-00-0, 67-64-1, 107-02-8, 75-07-0
CHEMICAL: FORMALDEHYDE, ACETONE, ACROLEIN, ACETALDEHYDE
SOURCE: Sugar Beet Processing Plant
PROJECT TYPE: Source Assessment, Exposure Assessment, Source Sampling, Dispersion Modeling
DESCRIPTION: This study will evaluate six to nine different sources of VOCs at the plant. With data, environmental impacts will be modeled and health risk assessed. The project had progressed to the estimation of emissions and associated health risk. The next monitoring is to be performed to support estimations.

CL-BIB-0297

TITLE: Study to Define and Determine Mitigation Methods for Air Toxics in Puget Sound
STATUS: Started FY 87; ongoing
CONTACT: EPA Region X, Naydene Maykut (206) 344-7335
CAS NO: CL-ORGANIC, CL-METAL, CL-PM, CL-CARBON
CHEMICAL: ORGANIC COMPOUNDS, METALLIC COMPOUNDS, PARTICULATE MATTER, (10), TOTAL CARBON
PROJECT TYPE: Source Assessment, Control Technology, Dispersion Modeling, Esposure Assessment
DESCRIPTION: The project is being coordinated by Puget Sound Air Pollution Control Agency. Its objective is to first identify and characterize sources of air toxics, then to evaluate risk to the exposed population and determine mitigation options. The focus has been on wood smoke in neighborhoods with some data collection complete and to continue next winter. Another major category is industry; this will begin this year with site selection and evaluation.

CL-BIB-0298

TITLE: Ambient Air Monitoring in Portland, Oregon (Urban Soup)
STATUS: Started 10/87; ongoing
CONTACT: EPA Region X, Greg Lande (503) 229-5630
CAS NO: CL-ORGANIC, CL-PM, CL-METAL
CHEMICAL: VARIOUS, ORGANIC COMPOUNDS, PARTICULATE MATTER, METALLIC COMPOUNDS
PROJECT TYPE: Source Assessment, Ambient Monitoring, Exposure Assessment
DESCRIPTION: This project is a part of the Toxic Air Monitoring System and generates ambient monitoring data for the Portland Air Shed. Currently these data are used in a preliminary assessment of air toxics concentrations. Once complete, the results will be used to prioritize future emphasis for the air toxics program.

CL-BIB-0299

TITLE: Ambient Air Monitoring for PCBs in El Dorado, Arkansas
STATUS: Ongoing
CONTACT: EPA Region VI, John Mitchell (501) 562-7444
CAS NO: 1336-36-3
CHEMICAL: POLYCHLORINATED BIPHENYLS
SOURCE: Hazardous Waste Incinerators
PROJECT TYPE: Ambient Monitoring
DESCRIPTION: The project intent is to determine if levels of PCBs are elevated around the incinerator relative to background typical of (1) the State, and (2) other urban areas.

CL-BIB-0303

TITLE: Cellular and Molecular Cardiac Toxicology
STATUS: Started 10/86; complete 9/89
CONTACT: NIOSH/DBBS/ETB, Monk Torrason (513) 533-8392
CAS NO: CL-VARIOUS
CHEMICAL: VARIOUS
PROJECT TYPE: Toxicity Testing
DESCRIPTION: This project will develop and test in vitro methods as alternatives to using whole animals for screening potential cardiotoxins, and for evaluating mechanisms of action of known cardiotoxins. Methods development will be suitable for assessing heart function in adult as well as fetal and neonatal cardiac tissue.

CL-BIB-0304

TITLE: Arylamine Adducts in Blood as Indicators of Exposure
STATUS: Started 10/85; complete 9/88
CONTACT: NIOSH/DBBS/ETB, Kevin Cheever (513) 533-8392
CAS NO: 101-14-4
CHEMICAL: 4,4'-METHYLENE BIS (2-CHLOROANILINE)
PROJECT TYPE: Toxicity Testing
DESCRIPTION: This project will investigate the feasibility of using urinary metabolites and hemoglobin adducts as quantitative, integral exposure methods.

CL-BIB-0308

TITLE: Pulmonary Response to Inhaled Fibrogenic Minerals
STATUS: Started 10/86; complete 9/89
CONTACT: NIOSH/DRDS/LIB, Val Vallyathan (304) 291-4474
CAS NO: CL-MINFIB
CHEMICAL: MINERAL FIBER
SOURCE: Mining, Construction
PROJECT TYPE: Toxicity Testing
DESCRIPTION: Short term, high dose inhalation experiments designed in these studies will provide valuable information on the pathogenesis of fibrogenic mineral. This study will contribute to the knowledge of major occupational lung diseases.

CL-BIB-0312

TITLE: Development and Demonstration of Indoor Radon Reduction Measures for Homes
STATUS: Started 3/87; complete 11/89
CONTACT: ORD/AEERL, Bruce Henschel (919) 541-4112
CAS NO: 10043-92-2
CHEMICAL: RADON
PROJECT TYPE: Indoor Air, Control Technology
DESCRIPTION: There are two projects with the same title assigned to two different contractors. The first is evaluating 16 houses in Dayton, OH; the testing is complete (Phase I) and an interim report is in preparation for publication. Phase II will begin in Fall '88. The second is the process of testing 19 houses in Maryland. Phase II for this will also begin Fall '88.

CL-BIB-0317

TITLE: Investigation of Radon Entry into Houses and Effectiveness of Mitigation Techniques - Evaluation Phase
STATUS: Started 8/86; complete; report due 7/88
CONTACT: ORD/AEERL, David Sanchez (919) 541-2979
CAS NO: 10043-92-2
CHEMICAL: RADON
PROJECT TYPE: Indoor Air, Control Technology, Source Sampling
DESCRIPTION: This evaluation phase study is complete, testing done 12/87. A draft report is due in June, the final report in July.

CL-BIB-0320

TITLE: Chemical-Specific Manuals for Accidental Releases and Hazard Identification Systems
STATUS: Started 11/86; complete 6/88
CONTACT: ORD/AEERL, Kelly Janes (919) 541-2852
CAS NO: CL-VARIOUS
CHEMICAL: VARIOUS
PROJECT TYPE: Emergency Response
DESCRIPTION: There will be a total of 13 different chemicals studied here. Each manual will describe control technologies available for preventing accidental releases of toxic chemicals. If releases into the environment do occur, the manual addresses what methods the industries use to contain the release and prevent the toxic chemicals from spreading into air, water, etc.

CL-BIB-0321

TITLE: Air Toxic Accidental Release Prevention Reference Manual - Mitigation Technology
STATUS: Started 1/87; complete 6/88
CONTACT: ORD/AEERL, Kelly Janes (919) 541-2852
CAS NO: CL-VARIOUS
CHEMICAL: VARIOUS
PROJECT TYPE: Control Technology, Emergency Response
DESCRIPTION: This reference manual is specific in emergency response actions and addresses such issues as: (1) once a chemical release has occurred, what measures can the industry take to maintain the release (i.e., foam, water sprays, etc); and (2) what type of emergency response procedures are available from the industry to warn the local communities (i.e., are local fire departments available, do facilities have equipment available to measure the released concentrations?)

CL-BIB-0324

TITLE: CFC Chemical Substitutes
STATUS: Started 8/86; ongoing
CONTACT: ORD/AEERL, Dean Smith (919) 541-2708
CAS NO: CL-CFC, 593-70-4
CHEMICAL: CHLOROFLUOROCARBONS, CHLOROFLUOROMETHANE
PROJECT TYPE: Control Technology
DESCRIPTION: Technical work has not begun yet.

CL-BIB-0329

TITLE: Determining Wood Stove Catalyst Emission Control Performance Degradation
STATUS: Started 10/86; complete 6/88
CONTACT: ORD/AEERL, Robert McCrillis (919) 541-2733
CAS NO: CL-WOOD
CHEMICAL: WOOD SMOKE
SOURCE: Woodstoves
PROJECT TYPE: Emission Factor, Control Technology
DESCRIPTION: The report will be published in FY 88. Various control technologies will be studied in relation to emission reduction.

CL-BIB-0330

TITLE: Study of the Effects of Appliance Type and Operating Variables on Residential Wood Combustion Emissions
STATUS: Started 3/87; complete 3/88
CONTACT: ORD/AEERL, Robert mcCrillis (919) 541-2733
CAS NO: CL-WOOD
CHEMICAL: WOOD SMOKE
SOURCE: Residential Wood Stoves
PROJECT TYPE: Emission Factor, Control Technology
DESCRIPTION: This project is part of the IACP. The report is presently in progress. Laboratory support work was done to verify the results of the Boise, ID, field study. Two different woodstoves were operated in the laboratory to correlate the emissions against burn rates, altitudes, stove model types, and wood species.

CL-BIB-0332

TITLE: Evaluation of HAP Controls under Transient Conditions
STATUS: Started 6/86; complete FY 88
CONTACT: AEERL/ATRD/IPB, Jane Bare (919) 541-1528
CAS NO: CL-VOC
CHEMICAL: VOLATILE ORGANIC COMPOUNDS
PROJECT TYPE: Ambient Monitoring, Accident Prevention/Emergency Response
DESCRIPTION: The project focuses on accidental and transient releases of chemicals into the environment, and the controls and mitigations for those releases. Specific VOCs are being studied that have acutely toxic effects.

CL-BIB-0334

TITLE: North West Woodstove Study
STATUS: Started 11/86; complete 8/87
CONTACT: ORD/AEERL, Robert McCrillis (919) 541-2733
CAS NO: CL-WOOD
CHEMICAL: WOOD SMOKE
SOURCE: Woodstoves
PROJECT TYPE: Emission Factor, Source Sampling
DESCRIPTION: This project is divided into two parts. The first part of the project will measure emissions in six homes from two catalytic stoves, two noncatalytic stoves, and two conventional woodstoves. The second part of the project will determine the relationship between field emission samplers and laboratory regulatory emission samplers. The report is due FY 88.

CL-BIB-0335

TITLE: VOC and Hazardous Air Pollutant (HAP) Control of Department of Defense Facilities
STATUS: Started 2/87; ongoing
CONTACT: ORD/AEERL, Charles Darvin (919) 541-7633
CAS NO: CL-VOC
CHEMICAL: HAZARDOUS AIR POLLUTANTS, VOLATILE ORGANIC COMPOUNDS
SOURCE: DOD Facilities
PROJECT TYPE: Source Sampling, Control Technology
DESCRIPTION: An emissions survey was conducted at selected Department of Defense facilities. Both innovative and existing control technologies from one specific facility were studied. One control technology will be selected for application and evaluation.

CL-BIB-0337

TITLE: Vapor Phase Catalytic Oxidation of Mixed Volatile Organic Compounds
STATUS: Started 6/85; complete 6/88
CONTACT: ORD/AEERL, Mike Kosusko (919) 541-2734
CAS NO: CL-VOC
CHEMICAL: VOLATILE ORGANIC COMPOUNDS
PROJECT TYPE: Control Technology
DESCRIPTION: This project will evaluate commercial catalysts for control of nonchlorinated hydrocarbon mixtures and individual chlorinated hydrocarbons.

CL-BIB-0338

TITLE: Chlordane/Radon Mitigation Project
STATUS: Ongoing; report due summer '88
CONTACT: OAR/OPD, Betsy Agle (202) 382-7753
CAS NO: 57-74-9, 10043-92-2
CHEMICAL: CHLORDANE, RADON
PROJECT TYPE: Indoor Air, Control Technology
DESCRIPTION: The purpose of the project is to coordinate research into effectiveness of radon mitigation methods to reduce chlordane levels.

CL-BIB-0339

TITLE: Environmental Tobacco Smoke Risk Evaluation
STATUS: Ongoing; draft summary in progress
CONTACT: OAR/OPD, Jim Repace (202) 475-8593
CAS NO: CL-ETS
CHEMICAL: ENVIRONMENTAL TOBACCO SMOKE
PROJECT TYPE: Indoor Air, Exposure Assessment
DESCRIPTION: The project purpose is to formalize Agency evaluation of the risks of environmental tobacco smoke.

CL-BIB-0340

TITLE: Environmental Tobacco Smoke Manual
STATUS: Ongoing; report due fall '88
CONTACT: OAR/OPD, Jim Repace (202) 475-8593
CAS NO: CL-ETS
CHEMICAL: ENVIRONMENTAL TOBACCO SMOKE
PROJECT TYPE: Indoor Air, Regulatory Development Guidance
DESCRIPTION: Project purpose is to provide technical and policy guidance on mitigating risks from environmental tobacco smoke.

CL-BIB-0341

TITLE: Manual on Indoor Air Quality Problems in Commercial Buildings
STATUS: Ongoing; report due winter '88
CONTACT: OAR/OPD, Jim Repace (202) 475-8593
PROJECT TYPE: Indoor Air, Regulatory Development Guidance
DESCRIPTION: Project purpose is to provide guidance on identifying, preventing, and correcting indoor air quality problems in commercial buildings.

CL-BIB-0342

TITLE: Asbestos NESHAP Demolition and Renovation Inspection Safety Procedures Workshop Manual
STATUS: Started FY 88; report (draft) due 6/88
CONTACT: OAQPS/SSCD, Kirk Foster (919) 541-4571
CAS NO: 1332-21-4
CHEMICAL: ASBESTOS
PROJECT TYPE: Regulatory Development Guidance
DESCRIPTION: Safety procedures for Agency personnel inspecting asbestos NESHAP demolition and renovation sites.

CL-BIB-0343

TITLE: National Emission Standards for Hazardous Air Pollutants: Supplement to 86/006 Compilation, Current as of January 1988
STATUS: Started 12/07; report due 8/88.
CONTACT: OAQPS/SSCD, Kirk Foster (919) 541-4571
CAS NO: 7439-97-6, 75-01-4, 1332-21-4, 7440-41-7, 71-43-2, 7440-38-2, CL-RAD
CHEMICAL: MERCURY, VINYL CHLORIDE, ASBESTOS, BERYLLIUM, BENZENE, ARSENIC, RADIONUCLIDES
PROJECT TYPE: Regulatory Development Guidance
DESCRIPTION: Document will cover all NESHAP as of current date. Document contains current NESHAP regulations as published in the Federal Register and full text of all revisions and amendments.

CL-BIB-0344

TITLE: A Risk Assessment-based Air Enforcement Strategy for Harris County, Texas
STATUS: Started 10/86; complete; report in progress
CONTACT: EPA Region VI, Merritt Nicewander (214) 655-7229
CAS NO: 74-87-3, 106-99-0, 71-43-2, 50-00-0, 1330-20-7, 108-88-3
CHEMICAL: METHYL CHLORIDE, 1,3-BUTADIENE, BENZENE, FORMALDEHYDE, XYLENE, TOLUENE
PROJECT TYPE: Source Assessment, Exposure Assessment
DESCRIPTION: Five sources in Harris County emitting 76 chemicals total were evaluated initially: industrial point sources and fugitives, small area sources (service stations, etc.), mobile sources, and emergency releases/spills. Six were used in estimations of exposure to the surrounding population. Four of these were used in risk assessments. Results indicate significantly higher risk posed by fugitives. This supports aggressive enforcement of the new fugitive standards.

CL-BIB-0345

TITLE: Chemical Hazard Information Profile for Cyclohexylthiophthalimide
STATUS: Started FY 87
CONTACT: OTS/ECAD/CSB, John Leitzke (202) 382-3507
CAS NO: 17796-82-6
CHEMICAL: CYCLOHEXYLTHIOPHTHALIMIDE
SOURCE: Tire Manufacturing
PROJECT TYPE: CHIP, Source Assessment, Exposure Assessment, Toxicity Testing
DESCRIPTION: A summary of readily available information is presented in the following areas: production, use, environmental releases and fate, exposure information from monitoring, human health concerns, clinical and laboratory animal studies, and regulatory status.

CL-BIB-0346

TITLE: Chemical Hazard Information Profile for 2,4-pentanedione
STATUS: Started FY 87
CONTACT: OTS/ECAD/CSB, John Leitzke (202) 382-3507
CAS NO: 123-54-6
CHEMICAL: 2,4-PENTANEDIONE (ACETYLACETONE)
SOURCE: Manuf. of specialty chemicals (metal chelates, intermediate in drug and anti-bacterial agents manuf., acetyl acetone peroxide)
PROJECT TYPE: CHIP, Source Assessment, Exposure Assessment, Toxicity Testing
DESCRIPTION: A summary of readily available information is presented on the following areas: production, use environmental releases and fate, exposure information from monitoring, human health concerns, clinical and laboratory animal studies, and regulatory status.

CL-BIB-0347

TITLE: Field Evaluation of a Heavy Gas Detection and Dispersion Approach Using a Whole Air Technique
STATUS: Started FY 86; ongoing; reports in preparation
CONTACT: EPA Region VII, John Helvig (913) 236-3884
CAS NO: 71-55-6, 108-88-3
CHEMICAL: 1,1,1-TRICHLOROETHANE, TOLUENE
PROJECT TYPE: Ambient Monitoring
DESCRIPTION: Models under development that determine placement of field samples were tested in a field setting by sampling and analyzing canister samples of test atmospheres. Analyses were performed using GC/FID. Additional refinements of the models will be ongoing in 1988.

CL-BIB-0348

TITLE: Refinement of a Detection and Analysis Approach to Volatile Organic Compound Release Characterization Using a Whole Air Technique
STATUS: Started FY 87; ongoing; reports in preparation
CONTACT: EPA Region VII, John Helvig (913) 236-3884
CAS NO: 71-55-6, 108-88-3
CHEMICAL: 1,1,1-TRICHLOROETHANE, TOLUENE
PROJECT TYPE: Ambient Monitoring
DESCRIPTION: Two chemicals were used in a portable generator to set up a test atmosphere. The atmosphere was sampled using a stainless steel canister and Tenax tubes deployed in field configuration, based on meteorological conditions. Analyses were performed on subsamples of the spheres and on the Tenax tubes using GC/FID. Next step will be to develop quality assurance measures, perform further evaluation of the sampler deployment and additional field studies.

CL-BIB-0349

TITLE: Weight of Evidence
STATUS: Ongoing
CONTACT: OHEA/REAG, Hal Zenick (202) 475-8913
CAS NO: CL-ORGANIC
CHEMICAL: VARIOUS ORGANIC
PROJECT TYPE: Health Assessment, Risk Assessment
DESCRIPTION: This project will generate weight of evidence approaches for estimating the reproductive, developmental, and inheritable risks for short-term exposure to nine air pollutants.

CL-BIB-0350

TITLE: Develop Dosimetry Models for VOC Hazard Identification
STATUS: Started 10/87; complete 9/92
CONTACT: OHR/HERL-RTP, John Overton (919) 541-7867
CAS NO: CL-VOC
CHEMICAL: VOLATILE ORGANIC COMPOUNDS (VOC)
PROJECT TYPE: Toxicity Testing, Health Assessment
DESCRIPTION: The purpose of this project is to develop whole body dosimetry models for volatile organic compounds that assess respiratory tract depositon and translocation of chemicals to other body compartments.

CL-BIB-0351

TITLE: Interim Air Toxics Data Base
STATUS: Started FY 84; complete FY 88
CONTACT: OAQPS/TSD/MRB, Bob Faoro (919) 541-5459
CAS NO: CL-VOC
CHEMICAL: VOLATILE ORGANIC COMPOUNDS (VOC)
PROJECT TYPE: Ambient Monitoring
DESCRIPTION: As part of a continuing program to control hazardous air pollutants, EPA's Office of Air Quality Planning and Standards has created the Interim Air Toxic Base (IATDB), which stores summary statistics of VOC data collected by State, local, and Federal agencies. The purpose of this data base is twofold: (1) it serves as an information exchange for participating agencies; and (2) it serves as an interim data base for air toxic data until the air toxic portion of EPA's Aerometric Information Retrieval System (AIRS) becomes available.

CL-BIB-0352

TITLE: Ambient Air Toxics Monitoring - Methods Development and Sample Analysis
STATUS: Started FY 87; ongoing
CONTACT: OAQPS/TSD/MRB, Jane Leonard (919) 541-5653
CAS NO: CL-VARIOUS
CHEMICAL: VARIOUS
PROJECT TYPE: Ambient Monitoring
DESCRIPTION: The Toxic Air Monitoring system (TAMS) was implemented as a pilot project with the goals of (1) evaluating methods of sample collection and analysis for volatile toxic pollutants in ambient air; (2) characterizing ambient concentrations in selected urban atmospheres; (3) gaining assurance experience; and (4) sharing technology with state/local agencies. Sampling is currently ongoing, with the latest status report issued in February, 1988.

CL-BIB-0353

TITLE: Special Urban Monitoring Program
STATUS: Started FY 87; ongoing
CONTACT: OAQPS/TSD/MRB, Harold G. Richter (919) 541-5367
CAS NO: CL-VARIOUS
CHEMICAL: VARIOUS
PROJECT TYPE: Ambient Monitoring
DESCRIPTION: Because of recent concern for high cancer risk from multi-source, multi-pollutant interactions in urban areas, State and local agencies have been seeking ways in which to assess the magnitude of potentially toxic compounds in their ambient air; to fill the need, EPA is coordinating toxic monitoring programs designed to provide air quality data for screening purposes. These programs are separate from programs within the Toxics Air Monitoring System (TAMS). Sampling is ongoing with equipment provided by EPA and manpower provided by state/local agencies.

CL-BIB-0354

TITLE: Reportable Quantities Regulations
STATUS: Ongoing
CONTACT: OERR/ERD, Barbara Hostage (202) 382-2198
CAS NO: CL-VARIOUS
CHEMICAL: VARIOUS
PROJECT TYPE: Accident Prevention/Emergency Response
DESCRIPTION: Development of regulations for 727 CERCLA hazardous substances and 321 compounds under SARA Title III is addressed in this project. Most regulations have been written and are expected to be promulgated in FY 88.

CL-BIB-0355

TITLE: Interpreted Role of Federally Permitted Releases
STATUS: Ongoing
CONTACT: OERR/ERD, Barbara Hostage (202) 382-2198
CAS NO: CL-VARIOUS
CHEMICAL: VARIOUS
SOURCE: All (any release into the environment)
PROJECT TYPE: Accident Prevention/Emergency Response
DESCRIPTION: A release of any hazardous substance into the environment greater than the allowable permitted quantity is subject to reporting requirements. This FR notice is awaiting release by OMB and will focus on reporting requirements to the National Response Center.

CL-BIB-0356

TITLE: Locating and Estimating Air Emissions from Sources of Perchloroethylene and Trichloroethylene
STATUS: Ongoing
CONTACT: OAQPS/AQMD/NPPB, Anne Pope (919) 541-5373
CAS NO: 127-18-4, 79-01-6
CHEMICAL: PERCHLOROETHYLENE, TRICHLOROETHYLENE
PROJECT TYPE: Emission Factors, Source Assessment, Source Sampling, Control Technology
DESCRIPTION: The resulting report will be one in the series of "Locating and Estimating" documents. The document will describe sources of perchloroethylene and trichloroethylene. Also included will be process flow charts, listings of source locations, and emission factors. A section on sampling and analytical methods will be presented.

CL-BIB-0357

TITLE: Air Toxic Emission Factor Compilation
STATUS: Ongoing
CONTACT: OAQPS/AQMD/NPPB, Anne Pope (919) 541-5373
CAS NO: CL-VARIOUS
CHEMICAL: VARIOUS
PROJECT TYPE: Emission Factors
DESCRIPTION: This project involves searching the literature for emission factors for about 100 potentially toxic substances. Emission Factors are entered into a computerized data base through which a user can search and sort for information by pollutant name, CAS #, SCC Code, SIC Code, and process type. A report describing the preparation of the data base is also included. A brief user's guide will accompany the data base.

CL-BIB-0358

TITLE: Locating and Estimating Air Emissions from Sources of 1,3-Butadiene
STATUS: Ongoing; complete FY 89
CONTACT: OAQPS/AQMD/NPPB, Anne Pope (919) 541-5373
CAS NO: 106-99-0
CHEMICAL: 1,3-BUTADIENE
PROJECT TYPE: Emission Factors, Source Assessment, Source Sampling, Control Technology
DESCRIPTION: The resulting report will be one in the series of "Locating and Estimating" documents. The document will describe sources of 1,3-butadiene. Also included will be process flow charts, listings of source locations, and emission factors. A section on sampling and analytical methods will be presented.

CL-BIB-0359

TITLE: Urban Air Toxics Program
STATUS: Ongoing
CONTACT: OAQPS/AQMD/NPPB, Jim Southerland (919) 541-5523
CAS NO: CL-VARIOUS
CHEMICAL: VARIOUS
SOURCE: Various (automobiles, dry cleaners, solvent users, etc.)
PROJECT TYPE: Urban Risk Assessment
DESCRIPTION: A mixture of toxic air compounds is being assessed for health risks. The sources of interest are smaller, non-point sources such as automobiles, dry cleaners, etc. This is also a promotional project that encourages State and local agencies to monitor the urban areas themselves.

CL-BIB-0360

TITLE: Field Testing and Method Evaluation for Industrial Cooling Towers
STATUS: Started FY 87; ongoing
CONTACT: OAQPS/TSD/EMB, Daniel Bivins (919) 541-5244
CAS NO: 7440-47-3
CHEMICAL: HEXAVALENT CHROMIUM, TOTAL CHROMIUM
SOURCE: Industrial cooling towers
PROJECT TYPE: Source Sampling, Source Assessment, Control Technology
DESCRIPTION: A number of industrial cooling towers are being tested to characterize the performance of selected technologies. The project is designed for purposes of developing background information for New Source Performance Standards or NESHAP. Method evaluation is being performed concurrent with the field tests. Measurements have focused on hexavalent chromium and total chromium.

CL-BIB-0361

TITLE: Field Testing and Method Evaluation of Chrome Electroplating Plants
STATUS: Ongoing
CONTACT: OAQPS/TSD/EMB, Frank Clay (919) 541-5236
CAS NO: 7440-47-3
CHEMICAL: HEXAVALENT CHROMIUM
SOURCE: Chrome Electroplating Plants
PROJECT TYPE: Source Sampling, Source Assessment, Control Technology
DESCRIPTION: A number of chrome electroplating plants are being tested to characterize the performance of selected control technologies. Method evaluation is being performed concurrent with the field tests. Measurements have focused on hexavalent chromium.

CL-BIB-0362

TITLE: Field Testing of Municipal Waste Combustors
STATUS: Ongoing
CONTACE: OAQPS/TSD/EMB, Clyde E. Riley (919) 541-5242
CAS NO: CL-VARIOUS
CHEMICAL: PARTICULATE MATTER, HYDROCHLORIC ACID, DIOXINS, FURANS, SULFUR DIOXIDE, CARBON MONOXIDE
SOURCE: Municipal waste combustors
PROJECT TYPE: Source Sampling, Source Assessment, Control Technology
DESCRIPTION: A number of municipal waste combustors (MWC) are being tested to characterize the performance of selected control technologies. Tests have included control device inlet and outlet concentrations of particulate matter, hydrochloric acid, dioxins, furans, SO2, and CO. The testing is being done to provide background data for the development of national emissions standards under Section 111 of the Clean Air Act.

CL-BIB-0363

TITLE: Integrated Risk Information System (IRIS)
STATUS: Ongoing
CONTACT: OHEA/ECAO-CIN, Jacqueline Patterson (513) 569-7544
CAS NO: CL-VARIOUS
CHEMICAL: VARIOUS
PROJECT TYPE: Risk Assessment
DESCRIPTION: IRIS is an electronic on-line data base of summary health risk assessment and regulatory information on chemical substances. The primary purpose is to provide guidance risk values to EPA risk assessors and decision-makers for use in EPA risk assessments. IRIS provides a basis for greater consistency in EPA risk management and decision-making. There are approximately 260 risk assessments available on-line.

CL-BIB-0364

TITLE: Radionuclides NESHAPS
STATUS: Started 12/87; complete 8/89
CONTACT: ORP/CSD/ESB, Terrance McLaughlin (202) 475-9610
CAS NO: CL-RAD
CHEMICAL: RADIONUCLIDES
PROJECT TYPE: NESHAP Development, Risk Assessment
DESCRIPTION: In response to the vinyl chloride court decision, the Agency has made a voluntary decision to reassess the health risks for radionuclides. The existing data will be reassessed, with reproposal and repromulgation in 1989.

CL-BIB-0365

TITLE: Controlling Air Toxics (CAT) Version 2.0
STATUS: Ongoing
CONTACT: AEERL/ATRD/ATCB, Sharon Nolen (919) 541-2821
CAS NO: CL-VARIOUS
CHEMICAL: VARIOUS
PROJECT TYPE: Control Technology
DESCRIPTION: The current advisory system software, Controlling Air Toxics (CAT) will be modified to make it more user-friendly and useful in evaluating permit applications. The task will cover the following activities: (a) incorporation of the most recent version of the pollutant crosswalk from the NATICH data base, (b) expansion of the HAP data base to include additional compounds and filling the existing data gaps, and (c) guidance on adding new pollutants to the HAP data base. A tutorial manual will also be prepared.

CL-BIB-0366

TITLE: Investigation of Emissions from Burning of Agricultural Plastics
STATUS: Ongoing
CONTACT: AEERL/CIAD/CRB, William Linak (919) 541-5792
CAS NO: CL-VOC, CL-DIOXIN, CL-FURAN
CHEMICAL: VOLATILE ORGANIC COMPOUNDS, DIOXINS, FURANS
PROJECT TYPE: Ambient Monitoring
DESCRIPTION: The State of Florida requested that EPA look at the burning of plastics in their agricultural fields. EPA simulated plastic burns in the laboratory and sampled the emissions by CEM. The samples were then analyzed by GC/MS, Ames tests, and bioassays. The results will be presented in a final report.

CL-BIB-0367

TITLE: Recommended Guidelines for Stack Testing at Municipal Waste Combustion Facilities
STATUS: Ongoing
CONTACT: ORD/EMSL-RTP, Larry Johnson (919) 541-7943
CAS NO: CL-PM, CL-METAL, CL-DIOXIN, CL-FURAN
CHEMICAL: PARTICULATE MATTER, METALLIC COMPOUNDS, DIOXINS, FURANS
SOURCE: Municipal Waste Combustors
PROJECT TYPE: Source Sampling
DESCRIPTION: A work group was composed of EPA, State, and local officials, incinerator operators, and consultants. The group discussed the best methods for sampling MWC stacks and sample analysis. Also discussed was the best way to report the data so that the reports are consistent from one state to the next. A summary document will be published.

CL-BIB-0368

TITLE: Tier II, Stage 2 Modeling Improvements
STATUS: Started 4/88; complete 7/88
CONTACT: OAQPS/TSD/SRAB, Dave Guinnup (919) 541-5368
CAS NO: CL-VARIOUS
CHEMICAL: VARIOUS
PROJECT TYPE: Dispersion Modeling
DESCRIPTION: Predicting the ambient levels of toxic chemicals in the vicinity of industrial plants motivates the investigation of multiple simultaneous toxic releases which may occur for different durations and with different frequencies. Efforts are underway to improve the refined modeling of such plants to account for these complications. In addition, the capability for estimating the potential impact area associated with given release combinations is being incorporated into the modeling package.

CL-BIB-0369

TITLE: Ooms/DEGADIS Modeling Improvements
STATUS: Started 5/88; complete 9/88
CONTACT: OAQPS/TSD/SRAB, Dave Guinnup (919) 541-5368
CAS NO: CL-VARIOUS
CHEMICAL: VARIOUS
PROJECT TYPE: Dispersion Modeling
DESCRIPTION: The Ooms/DEGADIS model was developed for the EPA to use in predicting the dispersion of elevated releases of denser-than-air gases. This model performs a trajectory calculation which tracks the downward course of the dense gas until it touches the ground and follows this with a dense gas dispersion calculation. Efforts to improve this modeling package are being directed at extending the range of applicability of the model to include the dispersion of dense gas plumes which become neutrally buoyant (as a result of dilution with the atmosphere) prior to touching the ground.

CL-BIB-0370

TITLE: Investigation, Documentation and Testing of a Proposed Wet Deposition and Related Algorithms to ISC Models
STATUS: Ongoing
CONTACT: OAQPS/TSD/SRAB, Peter Eckhoff (919) 541-5385
CAS NO: CL-VARIOUS
CHEMICAL: VARIOUS
SOURCE: Municipal Waste Combustors
PROJECT TYPE: Dispersion Modeling
DESCRIPTION: The UNAMAP series of ISC models does not include an algorithm for considering wet deposition. Recent work by the H.E. Cramer Co., Inc., has added a wet deposition algorithm to ISCST for evaluating the environmental effects of emissions from a municipal waste combustor site. The purpose of this contract is to have the contractor do a literature search, evaluation and documentation so a similar wet deposition algorithm can be added to ISCST. The contractor is also tasked with laying the groundwork for eventual addition of a wet deposition algorithm to ISCLT.

CL-BIB-0371

TITLE: Assessment of Air Quality Impacts from Superfund Sites: Evaluation of Emissions During Site Cleanups
STATUS: Started 9/87; ongoing
CONTACT: EPA Region V, John Summerhays (312) 353-6009
CAS NO: CL-HAZWAST
CHEMICAL: HAZARDOUS COMPOUNDS
SOURCE: Superfund Cleanup Operation Sites
PROJECT TYPE: Emission Factors
DESCRIPTION: The purpose of this project is to develop a manual with recommendations for estimating emissions from Superfunds cleanup sites.

CL-BIB-0372

TITLE: Health Assessment Document for Mineral Fibers
STATUS: Ongoing
CONTACT: OHEA/ECAO-RTP, Dennis Kotchmar (919) 541-4158
CAS NO: CL-MINFIB
CHEMICAL: MINERAL FIBERS
PROJECT TYPE: Health Assessment
DESCRIPTION: This project is a comprehensive assessment of the known health data, including carcinogenicity, mutagenicity, teratogenicity, and reproductive effects from all exposure routes on mineral fibers. This document is one of a series of health assessment documents (HADs). The HADs serve as the scientific data base for potential health effects and are used by the OAQPS to determine the possible listing of hazardous air pollutants under Sections 111 and 112 of the Clean Air Act.

CL-BIB-0373

TITLE: Health Assessment Document for Methyl Isocyanate
STATUS: Ongoing
CONTACT: OHEA/ECAO-RTP, Mark Greenberg (919) 541-4156
CAS NO: 624-83-9
CHEMICAL: METHYL ISOCYANATE
PROJECT TYPE: Health Assessment
DESCRIPTION: This project is a comprehensive assessment of the known health data, including carcinogenicity, mutagenicity, teratogenicity and reproductive effects from all exposure routes on methyl isocyanate. This document is one of a series of health assessment documents (HADs). The HADs serve as the scientific data base for potential health effects and are used by the OAQPS to determine the possible listing of hazardous air pollutants under Sections 111 and 112 of the Clean Air Act.

CL-BIB-0374

TITLE: Health Assessment Document for Toluene Diisocyanate
STATUS: Ongoing
CONTACT: OHEA/ECAO-RTP, Mark Greenberg (919) 541-4156
CAS NO: 584-84-9
CHEMICAL: TOLUENE-2,4-DIISOCYANATE
PROJECT TYPE: Health Assessment
DESCRIPTION: This project is a comprehensive assessment of the known health data, including carcinogenicity, mutagenicity, teratogenicity and reproductive effects from all exposure routes on toluene diisyocyanate. This document is one of a series of health assessment documents (HADs). The HADs serve as the scientific data base for potential health effects and are used by the OAQPS to determine the possible listing of hazardous air pollutants under Sections 111 and 112 of the Clean Air Act.

CL-BIB-0375

TITLE: Measurement of Exposures During Firefighting
STATUS: Started 10/86; complete 9/89
CONTACT: NIOSH/DRDS/ENIB, Joseph Burkhart (513) 291-4304
CAS NO: CL-VARIOUS
CHEMICAL: VARIOUS
PROJECT TYPE: Exposure Assessment
DESCRIPTION: An industrial hygiene survey of fire fighters will be undertaken to determine the exposures encountered during firefighting in urban areas.

CL-BIB-0376

TITLE: Glycol Ethers - NTP Management
STATUS: Started 10/86; complete 9/90
CONTACT: NIOSH/DBBS/ABPB, Lloyd Stettler (513) 533-8400
CAS NO: 110-80-5, 109-86-4
CHEMICAL: 2-ETHOXYETHANOL, 2-METHOXYETHANOL
PROJECT TYPE: Toxicity Testing
DESCRIPTION: This project provides an NTP chemical manager to develop prechronic and chronic study designs for toxicity and cancer. Several glycol ethers were nominated to NTP because of their wide use in the industry, potential for increased usage, and concern about chronic toxicity by UAW INT. Union, CPSC and NIOSH.

CL-BIB-0377

TITLE: Support of EPA's Environmental Epidemiologic Program
STATUS: Started 10/85; complete 6/89
CONTACT: NIOSH/DSHEFS/IWSB, Paul Schulte (513) 841-4203
CAS NO: 75-21-8
CHEMICAL: ETHYLENE OXIDE
PROJECT TYPE: Epidemiology Study
DESCRIPTION: This study will assess the role of biological markers among workers who have been exposed to ethylene oxide.

CL-BIB-0378

TITLE: Decision on Regulation of Epichlorohydrin Under the Clean Air Act
STATUS: Ongoing
CONTACT: OAQPS/ESD/PAB, Tim Mohin (919) 541-5349
CAS NO: 106-89-8
CHEMICAL: EPICHLOROHYDRIN
PROJECT TYPE: Pre-Regulatory Assessment
DESCRIPTION: The EPA will use available source and health information to estimate potential public exposure and risks resulting from non-accidental air emissions of epichlorohydrin from stationary sources. This analysis will be used to decide whether or not to conduct further analysis of epichlorohydrin as a toxic air pollutant under the Clean Air Act to determine if Federal regulation is warranted.

CL-BIB-0379

TITLE: Indoor Air Reference Data Base
STATUS: Ongoing
CONTACT: OHEA/ECAO-RTP, Darcy Campbell (919) 541-4474
CAS NO: CL-IAP
CHEMICAL: INDOOR AIR POLLUTANTS
PROJECT TYPE: Indoor Air Pollution
DESCRIPTION: This data base maintains a comprehensive bibliography of reference materials on indoor air pollution. There are about 2400 citations currently in the data base. The latest version was updated and published April 1988. The publication number is EPA-600/8-87-016.

CL-BIB-0380

TITLE: ORD IAQ Indoor Air Research Program
STATUS: Ongoing
CONTACT: OHEA/ECAO-RTP, Darcy Campbell (919) 541-4474
CAS NO: CL-IAP
CHEMICAL: INDOOR AIR POLLUTANTS
PROJECT TYPE: Indoor Air Pollution
DESCRIPTION: This listing describes the research projects that comprise the ORD indoor air research program. Among the descriptions are the following: the objective of the project; background information; and approach, milestones, and project contact.

CL-BIB-0381

TITLE: Decision on Regulation of Contaminant Asbestos Under The Clean Air Act
STATUS: Ongoing
CONTACT: OAQPS/ESD/PAB, Brenda Riddle (919) 541-5341
CAS NO: 1332-21-4
CHEMICAL: CONTAMINANT ASBESTOS
PROJECT TYPE: Pre-Regulatory Assessment
DESCRIPTION: The EPA will use available source and health information to estimate potential public exposure and risks resulting from non-accidental air emissions of contaminant asbestos from stationary sources. This analysis will be used to decide whether or not to conduct further analysis of contaminant asbestos as a toxic air pollutant under the Clean Air Act to determine if Federal regulation is warranted.

CL-BIB-0382

TITLE: Beryllium NESHAP Review
STATUS: Ongoing
CONTACT: OAQPS/ESD/PAB, Scott Voorhees (919) 541-5348
CAS NO: 7440-41-7
CHEMICAL: BERYLLIUM
PROJECT TYPE: NESHAP Development
DESCRIPTION: Current NESHAP for asbestos and assessment of any new data for health and/or source assessment will be reviewed.

CL-BIB-0383

TITLE: Decision on Regulation of Dioxins/Furans Under the Clean Air Act
STATUS: Ongoing
CONTACT: OAQPS/ESD/PAB, Fred Harchman (919) 541-5339
CAS NO: CL-DIOXIN, CL-FURAN
CHEMICAL: DIOXINS, FURANS
PROJECT TYPE: Pre-Regulatory Assessment
DESCRIPTION: The EPA will use available source and health information to estimate potential public exposure and risks resulting from non-accidental air emissions of dioxins/furans from stationary sources. This analysis will be used to decide whether or not to conduct further analysis of dioxins/furans as a toxic air pollutant under the Clean Air Act to determine if Federal regulation is warranted.

CL-BIB-0384

TITLE: Chromium Electroplating NESHAP Development
STATUS: Ongoing
CONTACT: OAQPS/ESD/ISB, Jim Crowder (919) 541-5596
CAS NO: 7440-47-3
CHEMICAL: CHROMIUM
SOURCE: Chrome electroplating
PROJECT TYPE: NESHAP Development
DESCRIPTION: NESHAP development is underway to regulate chromium emissions from industrial facilities.

CL-BIB-0385

TITLE: Industrial Cooling Towers Chromium NESHAP Development
STATUS: Ongoing
CONTACT: OAQPS/ESD/ISB, Jim Crowder (919) 541-5596
CAS NO: 7440-47-3
CHEMICAL: CHROMIUM
PROJECT TYPE: NESHAP Development
DESCRIPTION: A technical background information document will be developed. Tasks include field tests to establish performance of controls, and cost analysis for alternative controls.

CL-BIB-0386

TITLE: Reproposal of Regulation for Boilers, Industrial Furnaces, and Incinerators That Use Hazardous Waste as Fuel
STATUS: Ongoing
CONTACT: OSW/WMD/WTB, Dwight Hlustick (202) 382-7936
CAS NO: CL-METAL, CL-VOC, CL-VARIOUS
CHEMICAL: METALS, VOLATILE ORGANIC COMPOUNDS, VARIOUS
SOURCE: Industrial Furnaces, Hazardous Waste Incinerators, Industrial Boilers
PROJECT TYPE: Regulatory Development Guidance
DESCRIPTION: Regulations are being reproposed for the emissions of metals, VOC, and hazardous air pollutants from industrial boilers, furnaces, and hazardous waste incinerators. The Federal Register notification listing the intent to revise the regulations is proposed for July 1988.

CL-BIB-0387

TITLE: Tiered Control for Accidental Releases
STATUS: Ongoing
CONTACT: AEERL/ATRD/IPB, Jane Bare (919) 541-1528
CAS NO: CL-VARIOUS
CHEMICAL: HAZARDOUS AIR POLLUTANTS
PROJECT TYPE: Accident Prevention/Emergency Response
DESCRIPTION: This project studies three levels of controls to prevent accidental releases of toxic chemicals into the environment. Examples of controls would be: (1) addition of a scrubber; (2) additional maintenance procedures; or (3) upgrading construction materials.

CL-BIB-0388

TITLE: Prevention Reference Manual: Overviews on Preventing and Controlling Accidental Releases of Selected Toxic Chemicals
STATUS: Ongoing
CONTACT: AEERL/ATRD/IPB, Jane Bare (919) 541-1528
CAS NO: 107-13-1, 98-05-5, 98-07-7, 79-11-8, 110-00-9, 302-01-2, 7783-06-4, 55-86-7, 2032-65-7, 74-83-9, 26628-22-8, 597-64-8, 76-02-8
CHEMICAL: ACRYLONITRILE, BENZENE, ARSONIC ACID, BENZOTRICHLORIDE, CHLOROACETIC ACID, FURAN, HYDRAZINE, HYDROGEN SULFIDE, MECHLOROETHAMINE, METHIOCARB, METHYLBROMIDE, SODIUM AZIDE, TETRAETHYLTIN, TRICHLOROACETYL CHLORIDE
PROJECT TYPE: Accident Prevention/Emergency Response
DESCRIPTION: This study is concerned with thirteen of the 21 toxic chemicals designated under SARA Title III, Section 305. The project looks at state-of-the-art practices for preventing accidental releases for all industries in the United States. This document summarizes the properties of the 13 toxic chemicals and discusses controls which can be used to prevent accidental releases.

CL-BIB-0389

TITLE: Multimedia, Multipollutant Field Study To Establish Levels of Toxics Contained in Air, Soil, Sediments, Water and Agricultural Products from a Model Municipal Waste Combustor
STATUS: Ongoing
CONTACT: OHEA/ECAO-CIN, Larry Fradkin (513) 569-7584
CAS NO: CL-ORGANIC, CL-INORGAN
CHEMICAL: ORGANIC COMPOUNDS, INORGANIC COMPOUNDS
SOURCE: Municipal Waste Combustors
PROJECT TYPE: Risk Assessment
DESCRIPTION: During a one-year period, an ambient air monitoring network for pollutants will be operated at a municipal waste combustor in Rutland, Vermont. Ambient air samples will be analyzed for specific organic and inorganic compounds and also for other components which may be associated with municipal waste combustion. In addition, grab samples in agricultural soil, sediment and surface waters surrounding the facility will be collected and analyzed for similar toxic contaminants. This study will provide a framework for future field assessments of other municipal waste combustors.

CL-BIB-0390

TITLE: Studies on Toxicity Applicable to Risk Assessment (STARA)
STATUS: Ongoing
CONTACT: OHEA/ECAO-CIN, Rick Hertzberg (513) 569-7582
CAS NO: CL-VARIOUS
CHEMICAL: VARIOUS
PROJECT TYPE: Risk Assessment
DESCRIPTION: This database on the Agency's mainframe computer system contains quantitative toxicity data at the dose-group level compiled from world scientific publications. The associated programs allow easy access to chemical-specific toxicity data for on-screen review or downloading to a printer or personal computer. The programs also convert the raw data into common dose units of mg/kg/day, and provide graphs of the data as dose vs. duration vs. toxic severity. A user's guide is available. Chemical toxicity tables on-line as of Feb. 1988, 161; chemical epidemiological tables on-line as of Feb. 1988, 30.

CL-BIB-0391

TITLE: Source Category Parameters
STATUS: Ongoing; complete 6/88
CONTACT: OAQPS/ESD/CPB, Bob Rosensteel (919) 541-5674
CAS NO: CL-VARIOUS
CHEMICAL: VARIOUS
PROJECT TYPE: Source Assessment, Pre-Regulatory Assessment
DESCRIPTION: A data base of emission parameters for the top 100 pollutants from the current Modified Hazardous Air Pollutant Prioritization System (MHAPPS) will be developed. The data base will be used to rank source categories of emissions and identify the best regulatory candidates.

CL-BIB-0392

TITLE: The Toxic Interaction Database
STATUS: Ongoing
CONTACT: OHEA/ECAO-CIN, Judith Olsen (513) 569-7576
CAS NO: CL-VARIOUS
CHEMICAL: VARIOUS
PROJECT TYPE: Health Assessment
DESCRIPTION: This personal computer database contains summary toxic data from published laboratory studies on toxic interactions between chemicals. The data include the exposure conditions, observed toxic effects and type of interaction, as well as the statistical analysis method used. Diskettes containing the data and access programs are being shipped to all regions. There are 1200 chemical interactions listed as of Feb. 1988.

CL-BIB-0393

TITLE: SARA Title IV Report to Congress
STATUS: Ongoing; Report due FY 89
CONTACT: OAR/OPD/IAS, Bob Axelrod (202)475-7174
CAS NO: CL-VARIOUS
CHEMICAL: VARIOUS
PROJECT TYPE: Pre-Regulatory Assessment, Regulatory Development Guidance
DESCRIPTION: This report will describe EPA's activities and related activities of other Federal agencies that pertain to SARA Title IV work.

CL-BIB-0394

TITLE: Introductory Indoor Air Quality (IAQ) Course for State and Local Public Health Officials
STATUS: Ongoing; complete FY 89
CONTACT: OAR/OPD/IAS, Dave Mudarri (202) 475-8592
CAS NO: CL-IAP
CHEMICAL: INDOOR AIR POLLUTANTS
PROJECT TYPE: Indoor Air Pollution
DESCRIPTION: The Indoor Air Section of the Office of Air and Radiation will work with the Public Health Service and the National Environmental Health Association to provide training on IAQ issues. Course preparation should be completed in the winter 1988.

CL-BIB-0397

TITLE: Directory of State Contacts on Indoor Air Quality (IAQ)
STATUS: Ongoing; complete FY 88
CONTACT: OAR/OPD/IAS, Betsy Agle (202) 382-7753
CAS NO: CL-PEST, 1332-21-4, 10043-92-2, CL-VOC
CHEMICAL: PESTICIDES, ASBESTOS, RADON, VOLATILE ORGANIC COMPOUNDS
PROJECT TYPE: Indoor Air Pollution
DESCRIPTION: This directory will list contacts for IAQ projects pertaining to pesticides, asbestos, radon, and VOCs.

CL-BIB-0398

TITLE: Workbook of Models for Screening Air Toxics
STATUS: Ongoing; complete 9/88
CONTACT: OAQPS/AQMD/NPPB, Joe Touma (919) 541-5381
CAS NO: CL-VARIOUS
CHEMICAL: VARIOUS, HAZARDOUS AIR POLLUTANTS
PROJECT TYPE: Dispersion Modeling, Emission Factors
DESCRIPTION: This report will contain the following information: (1) a method for estimating emissions from releases; (2) a method for estimating dispersion modeling; and (3) an example of how the two relate to one another.

CL-BIB-0399

TITLE: Archive and Evaluate Selected Air Toxics Dispersion Models
STATUS: Ongoing; complete FY 89
CONTACT: OAQPS/AQMD/NPPB, Tom Braverman (919) 541-5383
CAS NO: CL-VARIOUS
CHEMICAL: VARIOUS
PROJECT TYPE: Dispersion Modeling
DESCRIPTION: The purpose of this project is to archive and evaluate dispersion model databases pertaining to toxic air pollutants.

CL-BIB-0400

TITLE: Toxic Chemical Testing for Assessment/Quality Assurance for Toxic Substances
STATUS: Started 10/80; complete 12/99
CONTACT: ORD/EMSL-RTP, Michael Beard (919) 541-2623
CAS NO: CL-VARIOUS
CHEMICAL: VARIOUS
PROJECT TYPE: Exposure Assessment
DESCRIPTION: The purpose of this project is to produce quality assurance chemicals, reagents, and instrument spectra, and review current monitoring methodology to maintain a higher quality database that is directly responsive to implementation of sections 4 and 6 of the Toxics Substances Control Act. One goal is to develop quality assurance protocols and guidelines for biological measurements and human exposure monitoring to support OTS field studies, exposure networks, and regulatory reviews.

CL-BIB-0401

TITLE: Toxic Chemical Testing for Assessment Exposure Monitoring Systems Development
STATUS: Ongoing; complete 12/99
CONTACT: ORD/EMSL-RTP, William Nelson (919) 541-2301
CAS NO: CL-VARIOUS
CHEMICAL: VARIOUS
PROJECT TYPE: Exposure Assessment
DESCRIPTION: The purpose of this project is to conduct research on exposure monitoring methods and systems to improve estimates of human exposure to pollutants. Data bases and procedures will be developed to assess human exposure in support of OTS programs. This includes relating exposures to body burdens, development of a geographical information system for exposure assessment and evaluation of data produced in total exposure assessment methods studies.

CL-BIB-0402

TITLE: Identification and Quantitation of Organic Compounds in Air
STATUS: Ongoing; complete 12/88
CONTACT: ORD/EMSL-RTP, Robert Lewis (919) 541-3065
CAS NO: CL-ORGANIC
CHEMICAL: ORGANICS
PROJECT TYPE: Ambient Monitoring
DESCRIPTION: This will be one in a series of reports on test methods development. Application of liquid and gas chromatography techniques will be investigated. Identification and quantitation of organic compounds in air will be reported.

CL-BIB-0403

TITLE: Performance Audit Results for POHC Testing During RCRA Trial Burns
STATUS: Ongoing; complete 2/89
CONTACT: ORD/EMSL-RTP, William Mitchell (919) 541-2769
CAS NO: CL-ORGANIC
CHEMICAL: ORGANIC COMPOUNDS
SOURCE: Incinerators
PROJECT TYPE: Source Sampling, Source Assessment
DESCRIPTION: A report will be published on the performance audit results for POHC testing during RCRA trial burns.

CL-BIB-0404

TITLE: Validation of the Flux Chamber Method for Impoundment Pond Emissions
STATUS: Ongoing
CONTACT: ORD/EMSL-RTP, Joe Knoll (919) 541-2952
CAS NO: CL-VARIOUS, CL-VOC
CHEMICAL: VARIOUS, VOLATILE ORGANIC COMPOUNDS
SOURCE: Impoundment Ponds, Landfills
PROJECT TYPE: Ambient Monitoring, Source Sampling
DESCRIPTION: This is part of the SW846 methods development project. Flux chambers will be evaluated to determine their accuracy and precision of use in impoundment ponds and landfills.

CL-BIB-0405

TITLE: Development of New Methods for SW846
STATUS: Started 10/82; complete 11/99
CONTACT: ORD/EMSL-RTP, Seymour Hochheiser (919) 541-1357
CAS NO: CL-VOC, CL-SVOC
CHEMICAL: VOLATILE ORGANIC COMPOUNDS, SEMIVOLATILE ORGANIC COMPOUNDS
PROJECT TYPE: Ambient Monitoring, Source Assessment
DESCRIPTION: Monitoring methods for organics will be developed and evaluated for ambient air and emission sources. Methods for dioxin monitoring will be developed. Additional matrices of interest include incinerator emissions containing a broad spectrum of volatile, semivolatile compounds, and landfill leachates containing intact, biodegraded or chemically altered components.

CL-BIB-0406

TITLE: Determination of Population Exposure to Mobile Source Pollutants
STATUS: Ongoing; complete 12/91
CONTACT: ORD/EMSL-RTP, William Nelson (919) 541-3184
CAS NO: CL-HCARB, CL-METAL
CHEMICAL: HYDROCARBONS, METALLIC COMPOUNDS
SOURCE: Automobiles
PROJECT TYPE: Exposure Assessment
DESCRIPTION: The goal of this research is to extend the general exposure methodology used successfully for CO to other situations and to other mobile source air pollutants. Data from previous population exposure field studies for CO will be reviewed, and data that can be generalized to other areas, such as human activity patterns, will be evaluated in detail. A workshop will be undertaken on the state-of-the-art of vehicular exposure model development.

CL-BIB-0407

TITLE; Residential Wood Combustion and Automotive Emissions on the Boise, Idaho Air Shed
STATUS: Started 10/87; complete: report in progress
CONTACT: ORD/EMSL-RTP, Ross Highsmith (919) 541-7828
CAS NO: CL-PM, CL-ALDEHYD, CL-VOC
CHEMICAL: PARTICULATE MATTER, ALDEHYDES, VOLATILE ORGANIC COMPOUNDS
SOURCE: Wood combustion, automobiles
PROJECT TYPE: Source Sampling, Source Assessment
DESCRIPTION: This project is part of the overall Integrated Air Cancer Project (IACP). Air sheds with one or two emission sources are being examined beginning with wood combustion for residential heating. The project will look at particulate matter, continuous emission monitoring, aldehydes, VOCs, and various other compounds.

CL-BIB-0408

TITLE: Integrated Air Cancer Project (IACP)
STATUS: Started 10/87; complete 9/92
CONTACT: ORD/EMSL-RTP, Barbara Andon (919) 541-7532
CAS NO: CL-CARCIN
CHEMICAL: CARCINOGENS
PROJECT TYPE: Exposure Assessment
DESCRIPTION: ORD has initiated the IACP utilizing four EPA laboratories in RTP, N.C., and one contractor. Utilizing monitoring data and modeling expertise, the studies will focus on specific problem areas and attempt to develop relationships between sources and receptors. In 1987, the IACP was a wood stove study in Boise, Idaho, Raleigh, N.C., and Albuquerque, New Mexico. Planning has been underway for several months for the 1988 study which will focus on residential distillate oil combustion (RDOC). The Environmental Monitoring Systems Laboratory's study design team has ranked cities in terms of oil usage, industrial concentration in areas, etc., in order to narrow the field to 5-6 potential areas where the six-week study will take place. ESD is currently working with EMSL to encourage the study design team to choose a study location.

CL-BIB-0409

TITLE: Support of EPA's Environmental Epidemiologic Program
STATUS: Started 10/85; complete 6/89
CONTACT: NIOSH/DSHEFS/IWSB, Paul Schulte (513) 841-4203
CAS NO: 75-21-8
CHEMICAL: ETHYLENE OXIDE
PROJECT TYPE: Epidemiology Study
DESCRIPTION: The environmental epidemiology program of the health effects research laboratory has responsibility for providing the Office of Toxic Substances (OTS) with the results of epidemiologic research to satisfy their regulatory missions. The OTS needs include assessments of human health risks for use in establishing a basis for requiring industrial testing under Section 4 of the Toxic Substances Control Act. The first study will examine biological markers associated with exposure to ethylene oxide in hospital workers.

CL-BIB-0410

TITLE: Mortality Study of Workers Exposed to Halowax
STATUS: Started 10/83; complete 9/90
CONTACT: NIOSH/DSHEFS/IWSB, Elizabeth Ward (513) 841-4203
CAS NO: 58718-66-4, 58718-67-5, 39450-50-0
CHEMICAL: HALOWAX 1000, HALOWAX 1001, HALOWAX 1099
SOURCE: Manufacture of Electric Cable -- Coating Process
PROJECT TYPE: Epidemiology Study
DESCRIPTION: Two plant sites will be included in this retrospective cohort mortality study. Plant "A" used chlorinated naphthalenes during the early 1940's to coat electrical cables. Approximately 9,000 individuals worked at the plant during that time and 800 of them developed dermatitis. Plant "B" used chlorinated naphthalenes from 1966 to 1968, during which time approximately 125 of 600 workers developed chloracne. The vital status of all cohort members will be ascertained, and for those who are dead, the underlying cause of death will be determined from the death certificate. The observed deaths will be compared to those expected, where the expected deaths are calculated based on a standard population, and are adjusted for age, race, sex, and calendar year.

CL-BIB-0411

TITLE: o-Dianisidine and o-Tolidine Dye Workers Exposure Study
STATUS: Started 10/82; complete 9/88
CONTACT: NIOSH/DSHEFS/IWSB, Bruce Hills (513) 841-4203
CAS NO: 119-90-4, 119-93-7, CL-DYE
CHEMICAL: 3,3'DIMETHOXYBENZIDINE, 3,3'DIMETHYLBENZIDINE, DYES
PROJECT TYPE: Exposure Assessment
DESCRIPTION: Industrial hygiene surveys will be conducted at facilities that manufacture or use dyes that are based on o-Dianisidine or o-Tolidine. Personal and area air monitoring will be performed to determine worker exposure to the airborne dyes. Urine samples from these workers will be analyzed for the dye metabolites, o-Dianisidine and o-Tolidine. In addition, the urine samples will be tested at Livermore National Laboratories for mutagenic activity.

CL-BIB-0412

TITLE: Case Control Study of Renal Disease and Occupational Exposure
STATUS: Started 2/83; complete 12/88
CONTACT: NIOSH/DSHEFS/IWSB, Nelson Steenland (513) 841-4203
CAS NO: CL-METAL, CL-SOLVENT
CHEMICAL: METALLIC COMPOUNDS, SOLVENTS
PROJECT TYPE: Epidemiology Study
DESCRIPTION: This is a population-based case-control study. Cases are 350 end-stage male renal patients diagnosed in Michigan between 1976-1982. Cases and controls are restricted to four urban areas (Lansing, Flint, Saginaw, and Detroit). Cases have diagnoses possibly associated with occupation, i.e., glomerulonephritis, nephrosclerosis, and interstitial disease. Diabetic, congenital, and obstructive kidney disease are excluded. Controls are selected via random-digit dialing, and are matched to cases on age, race, and neighborhood. Extensive occupational interviews by phone are conducted to determine if exposure to metals and solvents is associated with disease, as suggested in the literature occupational as well as life style factors are being examined.

CL-BIB-0413

TITLE: An Assessment of the Effectiveness of OSHA's Lead Standard
STATUS: Started 10/86; complete 9/89
CONTACT: NIOSH/DSHEFS/SB, Paul Seligman (513) 841-4304
CAS NO: 7439-92-1
CHEMICAL: LEAD
PROJECT TYPE: Exposure Assessment
DESCRIPTION By identifying industries with current problems controlling lead exposure, surveillance efforts and prevention strategies can be focused to eliminate occupational lead poisoning. All companies in Ohio which use lead or lead-containing compounds will be ranked based on the level of potential exposure to lead using an algorithm based on data from OSHA, NOES, and the Ohio Workers' Compensation System. A sample of companies from three exposure strata (high, moderate, low) will be surveyed to determine current lead exposures, blood lead levels, and degree of compliance with applicable safety and hygiene standards for lead. Data will be analyzed to account for the size of the company, years of operation, presence of union, type of process, etc.

CL-BIB-0414

TITLE: Case-Control Survey to Test Hypotheses Generated by Computer Maps
STATUS: Started 10/83; ongoing
CONTACT: NIOSH/DSHEFS/SB, Carol Burnett (513) 841-4303
CAS NO: CL-VARIOUS
CHEMICAL: DUSTS, FUMES, GASES
PROJECT TYPE: Epidemiology Study
DESCRIPTION: This project's purpose is to implement strategy recommendations for occupational lung diseases, cancers, cardiovascular diseases, and disorders of reproduction and dermatologic conditions. It will help to build death certificate based case-control studies as a new, in-house surveillance capability. These hypothesis testing activities facilitate the Institute's setting of research priorities. Hypotheses among occupation, industry, and disease are investigated by case-control analyses based on death certificates. Factors considered in the selection of hypotheses include the significance of the association under scrutiny, concentration of industry in the area, known or suspected hazards in the industry, epidemiologic data concordance with the association, and power of the investigation to detect differences.

CL-BIB-0415

TITLE: Analysis of Health Interview Survey Data
STATUS: Started 10/83; complete 6/89
CONTACT: NIOSH/DSHEFS/SB, William Crouse (513) 841-4303
CAS NO: CL-VARIOUS
CHEMICAL: DUSTS, FUMES, GASES, VARIOUS
SOURCE: All manufacturing
PROJECT TYPE: Epidemiology Study
DESCRIPTION: This project will continue the surveillance of employment-related morbidity to help achieve the goal of identifying and monitoring employment-related health effects in the U.S. worker population and to help establish priorities for NIOSH research. Data from the National Health Interview Survey will be used to characterize the health status, health habits, and occupation and industry characteristics of workers. As an example, analytic efforts will be extended through the use of NOHS data to characterize workplace hazards thought to be antagonistic to the habit of smoking. Specific analyses will be undertaken to assess the possible interaction between smoking habits and working conditions inputed from NOHS data.

CL-BIB-0416

TITLE: Population Exposure Studies
STATUS: Ongoing; report due summer '88
CONTACT: OHEA/ECAO, Harriet Ammann (919) 541-4930
CAS NO: CL-IAP
CHEMICAL: INDOOR AIR POLLUTANTS
PROJECT TYPE: Indoor Air, Exposure Assessment
DESCRIPTION: The purpose of the project is to determine concentrations of indoor air pollutants and activity patterns to estimate the population exposure to various indoor pollutants.

CL-BIB-0417

TITLE: Data Analysis of the Population Exposure Study
STATUS: Ongoing
CONTACT: OHEA/ECAO, Thomas McMullen (919) 541-4150
CAS NO: CL-IAP
CHEMICAL: INDOOR AIR POLLUTANTS
PROJECT TYPE: Indoor Air, Exposure Assessment
DESCRIPTION: The project objective is to graphically represent indoor air pollution exposure data, compare indoor and outdoor pollution levels, and evaluate health effects data at various exposure levels.

CL-BIB-0418

TITLE: TEAM Study: Indoor Air; 1982 Indoor Air Study of 2 Office Buildings
STATUS: Ongoing; final report due 9/88
CONTACT: EPA/ORD/OADEMQA, Lance Wallace (202) 382-5792
CAS NO: CL-VOC
CHEMICAL: VOLATILE ORGANIC COMPOUNDS
PROJECT TYPE: Indoor Air, Source Assessment
DESCRIPTION: Project objectives are to: (1) qualitatively identify VOCs occurring in office buildings, (2) quantitatively determine concentrations of 20 target VOCs, (3) examine new office buildings to monitor changes in VOC levels, and (4) examine building material emissions.

CL-BIB-0419

TITLE: TEAM Study: Indoor Air; Particle Study
STATUS: Ongoing
CONTACT: EPA/ORD/OADEMQA, Lance Wallace (202) 382-5792
CAS NO: CL-VARIOUS
CHEMICAL: VARIOUS INDOOR PARTICLES
PROJECT TYPE: Indoor Air
DESCRIPTION: The objective is to examine indoor particle concentrations. A monitoring instrument will be developed and tested.

CL-BIB-0420

TITLE: Indoor Air Studies of the Mutagenic Emissions from Unvented Combustion Sources
STATUS: Ongoing; initial study report 8/87
CONTACT: EPA/ORD/HERL, Judy Mumford (919) 541-3095
CAS NO: CL-ORGANIC
CHEMICAL: COMBUSTION ORGANICS
SOURCE: Kerosene heaters
PROJECT TYPE: Indoor Air, Toxicity Testing
DESCRIPTION: The purpose of the project is to develop and evaluate methods to determine mutagenicity of unvented combustion organics; identify mutagens produced; and develop emission factors and models with AEERL.

CL-BIB-0421

TITLE: Neurobehavioral and Sensory Irritant Effects of Complex VOC Mixtures in Humans
STATUS: Ongoing; report due 2/89
CONTACT: EPA/ORD/HERL, David Otto (919) 966-6226
CAS NO: CL-VOC
CHEMICAL: VOLATILE ORGANIC COMPOUNDS
PROJECT TYPE: Indoor Air, Exposure Assessment
DESCRIPTION: The project objective is to corroborate and extend Danish studies of human exposures to complex VOC mixtures which result in Sick Building Syndrome.

CL-BIB-0422

TITLE: Mutagenicity of Individual Indoor Air Mixtures
STATUS: Ongoing
CONTACT: EPA/ORD/HERL, Larry Claxton (919) 541-2329
CAS NO: CL-VARIOUS
CHEMICAL: VARIOUS
PROJECT TYPE: Indoor Air
DESCRIPTION: The project objective is to provide insight into the possible carcinogenicity of indoor pollutants and pollutant mixtures commonly encountered in real-life situations.

CL-BIB-0423

TITLE: Integrated Environmental Management Project
STATUS: Ongoing
CONTACT: EPA/OPPE/RID, Andy Manale (202) 382-2257
CAS NO: CL-VARIOUS
CHEMICAL: VARIOUS
PROJECT TYPE: Indoor Air
DESCRIPTION: The purpose of this project is to compare levels of air pollution inside and outside homes. Data were available 3/88; report pending.

CL-BIB-0424

TITLE: State Surveys
STATUS: Ongoing
CONTACT: EPA/OAR/ORP, Kirk Maconaughey (202) 475-9605
CAS NO: 10043-92-2
CHEMICAL: RADON
PROJECT TYPE: Indoor Air, Source Assessment
DESCRIPTION: These surveys will identify areas with high indoor radon levels in selected areas.

CL-BIB-0425

TITLE: House Evaluation Program
STATUS: Ongoing
CONTACT: EPA/ORP, Mike Nardis (202) 475-9605
CAS NO: 10043-92-2
CHEMICAL: RADON
PROJECT TYPE: Indoor Air, Source Assessment, Control Technology
DESCRIPTION: The project objective is to provide examples of radon identification and correction measures.

CL-BIB-0426

TITLE: Land Evaluation and Soil Gas Studies
STATUS: Started 1987; ongoing
CONTACT: EPA/OAR/ORP, Kirk Maconaughey (202) 475-9605
CAS NO: 10043-92-2
CHEMICAL: RADON
PROJECT TYPE: Indoor Air, Source Assessment
DESCRIPTION: The project objective is to identify land and soil characteristics that cause radon problems.

CL-BIB-0427

TITLE: Radon Demonstration Program
STATUS: Ongoing
CONTACT: EPA/ORD/OEETD, Al Galli (202) 382-2583
CAS NO: 10043-92-2
CHEMICAL: RADON
PROJECT TYPE: Indoor Air, Control Technology
DESCRIPTION: The purpose of the project is to develop and demonstrate long-term effective radon reduction measures to the public and private sectors.

CL-BIB-0428

TITLE: Study of Radon in Drinking Water
STATUS: Ongoing; report due spring '88
CONTACT: EPA/ORD, Gunther Craun (513) 569-7422
CAS NO: 10043-92-2
CHEMICAL: RADON
PROJECT TYPE: Indoor Air, Source Assessment
DESCRIPTION: The objective is to identify regions of country where radon may be present in drinking water.

CL-BIB-0429

TITLE: Epidemiological Study of Radon Effects
STATUS: Ongoing; final report due '93
CONTACT: EPA/ORD, Gunther Craun (513) 569-7422
CAS NO: 10043-92-2
CHEMICAL: RADON
PROJECT TYPE: Indoor Air, Epidemiologic Study
DESCRIPTION: The purpose of the project is to determine the effect of exposure from household levels of radon on lung cancer rates.

CL-BIB-0430

TITLE: Study of Chlorpyrifos Used as a Termiticide
STATUS: Ongoing
CONTACT: EPA/OPTS/OPP, Michael McDavit (202) 557-7400
CAS NO: 2921-88-2
CHEMICAL: CHLORPYRIFOS
SOURCE: Termiticides
PROJECT TYPE: Indoor Air, Exposure Assessment
DESCRIPTION: The project objectives are to assess exposure to and health issues surrounding chlorpyrifos. Testing completed FY 87.

CL-BIB-0431

TITLE: Non-Occupational Pesticide Exposure Survey
STATUS: Ongoing
CONTACT: EPA/ORD/EMSL, Andrew Bond (919) 541-4329
CAS NO: CL-PEST
CHEMICAL: PESTICIDES
SOURCE: Termiticides
PROJECT TYPE: Indoor Air, Exposure Assessment
DESCRIPTION: The study will measure levels of over 20 pesticides in homes in FL and MA. To be completed 3/88.

CL-BIB-0432

TITLE: Study of Exposure to Anti-Microbials
STATUS: Ongoing
CONTACT: EPA/OPTS/OPP, Jim Wilson (202) 557-7470
CAS NO: CL-VARIOUS
CHEMICAL: VARIOUS
SOURCE: Anti-microbial products
PROJECT TYPE: Indoor Air, Exposure Assessment
DESCRIPTION: The study objective is to determine exposure to anti-microbials from products used in buildings accessible to general public. Notices of intent to suspend due 2/88.

CL-BIB-0433

TITLE: Inert Ingredients in Pesticides
STATUS: Ongoing
CONTACT: EPA/OPTS/OPP, Tina Levine (202) 557-7892
CAS NO: CL-VARIOUS
CHEMICAL: VARIOUS
SOURCE: Pesticides
PROJECT TYPE: Indoor Air, Source Assessment
DESCRIPTION: This study will identify toxic inert ingredients used in pesticides and require actions by manufacturer to reduce risks to public health, as appropriate.

CL-BIB-0434

TITLE: A Study of Formaldehyde from Pressed Wood Products
STATUS: Ongoing
CONTACT: EPA/OPTS/OTS, George Semeniuk (202) 382-2134
CAS NO: 50-00-0
CHEMICAL: FORMALDEHYDE
SOURCE: Pressed wood products
PROJECT TYPE: Indoor Air
DESCRIPTION: The purpose of the project is to assess risks and identify and implement mitigation measures, if appropriate.

CL-BIB-0435

TITLE: Revisions to the NESHAP Regulation (Section 112 of the Clean Air Act) for Asbestos
STATUS: Ongoing
CONTACT: EPA/OAR/OAQPS, Simms Roy (919) 541-5263
CAS NO: 1332-21-4
CHEMICAL: ASBESTOS
PROJECT TYPE: Indoor Air, NESHAP
DESCRIPTION: The objective of the work is to protect public health from exposure to asbestos in ambient air. Revisions to NESHAP regulation are under way.

CL-BIB-0436

TITLE: Paradichlorobenzene (Used in Moth Repellents and Air Fresheners)
STATUS: Ongoing
CONTACT: EPA/OPTS/OTS, Larry Dorsey (202) 382-3777
CAS NO: 106-46-7
CHEMICAL: 1,4-DICHLOROBENZENE
SOURCE: Moth repellants, air fresheners
PROJECT TYPE: Indoor Air
DESCRIPTION: The purpose of this project is to assess risks; then to issue and implement regulations as necessary to protect health.

CL-BIB-0437

TITLE: Integrated Solvents Workgroup
STATUS: Ongoing
CONTACT: EPA/OPTS/OTS, Joe DeSantis (202) 382-3946
CAS NO: CL-ORGANIC, 75-09-2, 79-01-6, 127-18-4
CHEMICAL: ORGANICS, METHYLENE CHLORIDE, TRICHLOROETHYLENE, PERCHLOROETHYLENE
PROJECT TYPE: Indoor Air
DESCRIPTION: The purpose of the project is to coordinate interagency assessment of key policy issues regarding uses of 6 major solvents; also, to identify regulatory and non-regulatory options to reduce exposure. Decisions scheduled for 1988.

CL-BIB-0438

TITLE: Computerized Consumer Exposure Model (CCEM) Development
STATUS: Ongoing
CONTACT: EPA/OPTS/OTS, Pat Kennedy (202) 382-3916
PROJECT TYPE: Indoor Air, Exposure Assessment
DESCRIPTION: The purpose of the project is to design computer software to generate estimates of inhalation and dermal exposure to persons using consumer products.

CL-BIB-0439

TITLE: Study of Alternative Designs for Assessing Exposure in Homes
STATUS: Ongoing; draft report due 7/88
CONTACT: EPA/OPTS/OTS, Pat Kennedy (202) 382-3916
PROJECT TYPE: Indoor Air, Exposure Assessment
DESCRIPTION: The purpose of the project is to describe different approaches that may be used to assess exposure to toxic chemicals in indoor air in homes.

CL-BIB-0440

TITLE: Evaluation of Contaminant Migration in Indoor Air in Homes
STATUS: Ongoing; draft report due summer '88
CONTACT: EPA/OPTS/OTS, Pat Kennedy (202) 382-3916
PROJECT TYPE: Indoor Air, Exposure Assessment
DESCRIPTION: The purpose of the project is to improve methods for modeling exposure to contaminants in indoor air in homes.

CL-BIB-0441

TITLE: Investigation of Radon Entry into Dwellings and the Effects of Selected Radon Mitigation Techniques
STATUS: Started 1/88; complete summer 89
CONTACT: AEERL/CIAD/IAB, David Sanchez (919) 541-2979
CAS NO: 10043-92-2
CHEMICAL: RADON
PROJECT TYPE: Indoor Air, Source Sampling
DESCRIPTION: The study is being done by Princeton University. The objectives are to refine diagnostic techniques in basement houses, optimum sub-slab depressurization controls, evaluate durability of radon control systems, analyze effects of HVAC and other mechanical systems on Radon entry, and finally to transfer technology to a format for use in training of mitigators for certification.

CL-BIB-0442

TITLE: Investigation of Radon Entry into Houses and Effectiveness of Mitigation Techniques - Evaluation Phase
STATUS: Started summer 87; complete 12/88
CONTACT: AEERL/CIAD/IAB, David Sanchez (919) 541-2979
CAS NO: 10043-92-2
CHEMICAL: RADON
PROJECT TYPE: Indoor Air, Source Sampling, Control Technology
DESCRIPTION: This work is a follow-up of the joint study done by Oakridge National Labs and Princeton University with the same title. The focus is on basement houses and houses with crawl space. The objectives are to refine diagnostic techniques and to evaluate mitigation techniques in these types of houses. Eight houses in the Tennessee Valley area are under study.

CL-BIB-0443

TITLE: Woodburning Survey (Colorado)
STATUS: Ongoing
CONTACT: EPA Region VIII, Steve Frey (303) 293-1438
CAS NO: CL-WOOD
CHEMICAL: WOOD SMOKE
SOURCE: Residential wood burning
PROJECT TYPE: Source Assessment
DESCRIPTION: This survey will collect data on woodburning habits of residents of the metro-Denver area. It will also provide geographical distribution of woodburning devices. The survey developed could be utilized by other areas of Region VIII where the need for woodburning emissions inventory is necessary to the air toxics programs.

CL-BIB-0444

TITLE: Measurement of Selected Air Toxics (Montana)
STATUS: Ongoing
CONTACT: EPA Region VIII, DeeWitt Baulch (303) 293-1761
CAS NO: 108-95-2, 108-88-3, 50-00-0, 127-18-4, 1330-20-7, 71-43-2, 75-07-0
CHEMICAL: PHENOL, TOLUENE FORMALDEHYDE, PERCHLOROETHYLENE, XYLENE, BENZENE,ACETALDEHYDE
SOURCE: Petroleum refineries, sugar beet processing, motor vehicles, residential wood burning, gasoline storage, auto body shops, dry cleaners, printing shops, pulp mills, sawmills, plywood manufacturing, particleboard manufacturing
PROJECT TYPE: Ambient Monitoring
DESCRIPTION: This study will determine worst case winter and summer concentration of selected air toxics within the most populated and industrial airsheds of Montana, Billings, and Missoula. Collection of samples will be performed during winter and during summer. Winter period will be characterized by poor atmospheric dispersion and high levels of CO and particulate matter. The summer will be hazy, sunny and relatively calm. Samples will be taken at three or four locations in each city. Our location will be in a residential area.

CL-BIB-0445

TITLE: Chemical Analysis of Particulate Filters (Colorado)
STATUS: Ongoing
CONTACT: EPA Region VIII, DeeWitt Baulch (303) 293-1761
CAS NO: CL-PAH
CHEMICAL: POLYCYCLIC AROMATIC HYDROCARBONS
SOURCE: Automobiles
PROJECT TYPE: Source Assessment
DESCRIPTION: Analysis for polycyclic aromatic hydrocarbons will be conducted on filters collected from twenty vehicles representing three MOBILE3 classes, closed-loop, catalyst. Each class was subjected to three different fuels, unleaded regular, 11% MTBE, and 10% ethanol blend (gasohol). Filters from ten light/medium duty diesels will also be analyzed. These filters were subjected to two types of diesel fuel, "typical" and California low sulfur. Two sets of particulate filters were collected from each vehicle. One set is designated for elemental and organic carbon analysis. The second set is to be analyzed for gravimetric determinations and for organic speciation. The methodology from this project will be transferable to other air toxics programs in U.S. EPA Region VIII.

CL-BIB-0446

TITLE: Study of Enhanced Enforcement to Control Air Toxics
STATUS: Ongoing
CONTACT: EPA Region IX, Mike Stenberg (415) 974-8205
CAS NO: CL-VARIOUS
CHEMICAL: VARIOUS
PROJECT TYPE: Source Assessment, Exposure Assessment
DESCRIPTION: A study of the Los Angeles Basin sources of air toxics was performed. A report has been written but is under review.

CL-BIB-0447

TITLE: Phase I Development Demonstration of Mitigation for Florida Houses
STATUS: Started 11/87; complete 9/88
CONTACT: AEERL/CIAD/IAB, David Sanchez (919) 541-2979
CAS NO: 10043-92-2
CHEMICAL: RADON
PROJECT TYPE: Indoor Air, Control Technology
DESCRIPTION: The study will evaluate sub-slab depressurization techniques in 8 slab-on-grade houses. The objectives are to optimize this technique and to provide generic engineering specifications for its installation and operation.

CL-BIB-0448

TITLE: General Quantitative Risk Assessment Guidelines for Non-Carcinogenic Health Effects Data
STATUS: Ongoing
CONTACT: OHEA/ECAO-CIN, Michael Dourson (513) 569-7544
CAS NO: CL-VARIOUS
CHEMICAL: VARIOUS
PROJECT TYPE: Risk Assessment
DESCRIPTION: This report will offer methods and guidelines to estimate risk assessments from non-carcinogenic health effects data.

CL-BIB-0449

TITLE: Chamber Studies Characterizing the Organic Emissions from Kerosene Space Heaters: Phase II
STATUS: Ongoing; report due 10/89
CONTACT: AEERL/CIAD/IAB, James White (919) 541-2851
CAS NO: CL-IAP, CL-VOC, CL-SVOC
CHEMICAL: INDOOR AIR POLLUTANTS, VOLATILE ORGANIC COMPOUNDS, SEMIVOLATILE ORGANIC COMPOUNDS
SOURCE: Kerosene space heaters
PROJECT TYPE: Indoor Air Pollution, Source Assessment, Emission Factor
DESCRIPTION: The phased characterization of the particulate and organic emissions from unvented kerosene space heaters has been completed. (The emissions from 12 kerosene space heaters obtained from the Consumer Products Safety Commission were screened and reported in last year's Phase I study.) Four heaters were selected from Phase I for intensive characterization. These heaters cover a range of design types and Btu ratings. Measurments made during Phase II included aerosol mass via both personal pumps and PM-10 sampler, aerosol size distribution, particulate mutagenicity, and the classical combustion parameters. Volatile gases were collected in Summa canisters; semivolatile gases were collected in XAD.

CL-BIB-0450

TITLE: Volatile Organic Hydrocarbon and Aldehyde Distribution for the IACP, Boise, Idaho Residential Study
STATUS: Ongoing
CONTACT: ORD/ASRL-RTP, Roy Zweidinger (919) 541-2324
CAS NO: CL-ALDEHYD, CL-HCARB
CHEMICAL: ALDEHYDES, HYDROCARBONS
SOURCE: Woodburning homes
PROJECT TYPE: Source Assessment, Indoor Air Pollution
DESCRIPTION: The U.S. EPA's Integrated Air Cancer Project (IACP) conducted a field study in Boise, Idaho during November 1986-February 1987. As part of this study, samples were collected in ten pairs of homes, one with and one without a woodburning appliance. Paired homes were located near each other and concurrent sampling was conducted inside each home and outside the home not burning wood. In most cases, concentrations of total non-methane hydrocarbons and aldehydes were higher inside the homes than outside. Comparisons of individual hydrocarbon and aldehyde concentrations relative to woodburning vs. non-woodburning, daytime vs. nighttime, and indoor vs. outdoor will be discussed.

CL-BIB-0451

TITLE: Sources of Fine Particle Organic Matter in Boise
STATUS: Ongoing
CONTACT: ORD/ASRL-RTP, Charles Lewis (919) 541-3154
CAS NO: CL-ORGANIC
CHEMICAL: ORGANIC COMPOUNDS
SOURCE: Automobiles, wood smoke
PROJECT TYPE: Emission Factor, Ambient Moniotoring, Source Assessment
DESCRIPTION: In airsheds whose atmospheric mass loadings are dominated by woodsmoke and mobile source emissions, extractable organic matter (EOM) generally constitutes 50% or more of the fine particle ambient mass concentration. It is also the portion of the ambient aerosol associated with mutagenicity. For both reasons it is of interest to determine the percentage of EOM which is contributed by each source, as well as any other less obvious ones. In past IACP studies, a multiple linear regression approach, using Pb and K tracers for motor vehicle and wood smoke sources, respectively, has been very successful in the source apportionment of EOM (and also mutagenicity). However, since 1985, a significant change has occurred in Pb emissions of motor vehicles. New data will be used to evaluate the current viability of Pb as a tracer.

CL-BIB-0452

TITLE: Northeast Cooperative Woodstove Study - Phase II
STATUS: Ongoing
CONTACT: AEERL/ATRD/IPB, Robert McCrillis (919) 541-2733
CAS NO: CL-VARIOUS, CL-WOOD
CHEMICAL: VARIOUS, WOOD SMOKE
SOURCE: Woodstoves
PROJECT TYPE: Source Sampling, Emission Factors
DESCRIPTION: This project will follow the catalytic woodstove field performance and emission monitoring work, published as the Northeast Cooperative Woodstove Study, Volumes I and II.

CL-BIB-0453

TITLE: Semivolatile and Condensible Organic Compound Distribution in Ambient Air and Woodstove Emissions
STATUS: Ongoing
CONTACT: ORD/ASRL-RTP, Roy Zweidinger (919) 541-2324
CAS NO: CL-ORGANIC, CL-SVOC
CHEMICAL: ORGANIC COMPOUNDS, SEMIVOLATILE COMPOUNDS
SOURCE: Woodstoves, mobile sources
PROJECT TYPE: Ambient Monitoring, Source Sampling
DESCRIPTION: The distribution of organic material between vapor and condensed states is of interest since the physical state has significant effects on transport, reactivity and environmental effects of pollutants. Information will be gathered on the distribution of vapor phase and condensed organic material for an airshed primarily impacted by woodstove and mobile source emissions. Both ambient air and source sample results will be presented. Observations on the relationship of vapor phase semivolatile and condensed organic material in the source and ambient samples will be made. The significance of the semivolatile materials in assessing source impacts and air quality will also be examined.

CL-BIB-0454

TITLE: Particulate Matter-Organic Compounds Interactions on Municipal Incinerator Flyash
STATUS: Ongoing
CONTACT: ORD/EMSL-RTP, John Margeson (919) 541-2848
CAS NO: CL-POM
CHEMICAL: PARTICULATE ORGANIC MATTER
SOURCE: Municipal Incinerators
PROJECT TYPE: Source Sampling
DESCRIPTION: Flyash, a fine particulate effluent from municipal incinerators, consists of 70-95% inorganic material. The large surface area of the fine flyash from incineration allows adsorption and concentration of potentially mutagenic or carcinogenic polynuclear organic material (POM) on the particulate surface. The development of a laboratory-based gas chromatographic approach for evaluating the effects of compound/particle matter interaction using temperature and flow conditions which model particle and organic material collection in the Semi-VOST method will be studied. The gas phase retention of selected organic compounds on the municipal waste incineration flyash will be examined.

CL-BIB-0455

TITLE: Field Test Evaluation of a Methodology for Measuring Emissions of Selected Toxic Metals from Stationary Sources
STATUS: Complete; report due FY 88
CONTACT: ORD/EMSL-RTP, Thomas Ward (919) 541-3788
CAS NO: 7439-92-1, 7440-66-6, 7723-14-0, 7440-47-3, 7440-50-8, 7440-02-2, 7439-96-5, 7440-43-9, 7782-49-2, 7440-38-2, 7439-97-6, 7440-41-7, 7440-28-0, 7440-22-4, 7440-36-0, 7440-39-3
CHEMICAL: LEAD, ZINC, PHOSPHORUS, CHROMIUM, COPPER, NICKEL, MANGANESE, CADMIUM, SELENIUM, ARSENIC, MERCURY, BERYLLIUM, THALLIUM, SILVER, ANTIMONY, BARIUM
SOURCE: Municipal Solid Waste Incinerators
PROJECT TYPE: Source Sampling
DESCRIPTION: A multitask research effort has been implemented to develop a validated sampling and analytical technique to measure multiple metals in the emissions from stationary sources. The methodology is designed to measure 16 toxic metals. The sampling method was formulated based upon extensive literature and laboratory studies. The results of these studies indicate th that the desired design of the sampling train is a modified EPA Method 5 train.

CL-BIB-0456

TITLE: Laboratory Evaluation of a Test Method for Measuring Emissions of Selected Toxic Metals from the Incineration of Hazardous Materials
STATUS: Complete; report due FY 88
CONTACT: ORD/EMSL-RTP, Thomas Ward (919) 541-3788
CAS NO: CL-METAL
CHEMICAL: METALLIC COMPOUNDS
SOURCE: Municipal Waste Incinerators
PROJECT TYPE: Source Sampling
DESCRIPTION: This work was designed to formulate and evaluate a method for sampling and analyzing emissions from the incineration of hazardous materials for twelve toxic metals. A method was formulated consisting of a modified EPA Method 5 sampling train with nitric acid/hydrogen peroxide, water, and acidified potassium permanganate used as the absorbing solutions. Initially, the method was evaluated by spiking the absorbing solutions with the metals of interest, and digesting these samples either with conventional heating or open vessel microwave digestion methods. The samples were analyzed by inductively coupled plasma emission spectroscopy (ICPES). Both digestion methods were found to yield recoveries of 100 plus/minus 20 percent of the spiked metals.

CL-BIB-0457

TITLE: The Influence of Woodburning on the Mutagenicity of Air Outdoor and Indoors
STATUS: Ongoing
CONTACT: ORD/OHR/HERL, Joellen Lewtas (919) 541-3849
CAS NO: CL-WOOD, CL-IAP
CHEMICAL: WOOD SMOKE, INDOOR AIR POLLUTANTS
SOURCE: Woodstoves
PROJECT TYPE: Exposure Assessment, Source Sampling, Indoor Air Pollution
DESCRIPTION: Micro-mutagenesis bioassay methods have been developed and applied to the Integrated Air Cancer Project studies in order to determine the major sources of mutagens in the airshed and to evaluate human exposures. Simultaneous sampling and bioassay studies were conducted on indoor and outdoor air samples in matched pairs of homes with and without woodstoves. Analysis of samples collected in a major field study in Boise, ID confirm the results of a pilot indoor study in a Raleigh, NC neighborhood. The homes both with and without woodstoves had higher concentrations of particulate mutagens when the outdoor concentrations were elevated.

CL-BIB-0458

TITLE: Quality Assurance Considerations in the Design of Air Toxics Monitoring Programs at Superfund Sites
STATUS: Ongoing
CONTACT: EPA Region IX, Richard Crume (415) 974-8153
CAS NO: CL-HAZWAST
CHEMICAL: HAZARDOUS WASTE
PROJECT TYPE: Ambient Monitoring, Source Sampling
DESCRIPTION: During the past several years, air monitoring activities have dramatically increased at hazardous waste sites designated for cleanup by the U.S. EPA's Superfund program. This increase in activity results in the need for new and improved air sampling devices, sample preparation techniques, and analytical procedures for the new measurement of low concentrations of air toxics. This project provides guidance to Superfund project officers and contractors in designing quality assurance project plans and in making actual on-site measurements of toxic air contaminants.

CL-BIB-0459

TITLE: The Characterization of Aerosols in Residential Environments
STATUS: Ongoing; complete FY 88
CONTACT: ORD/EMSL-RTP, Russell Wiener (919) 541-1910
CAS NO: CL-PM
CHEMICAL: PARTICULATE MATTER
PROJECT TYPE: Source Assessment, Indoor Air Pollution, Exposure Assessment
DESCRIPTION: The objectives of this study were (1) to make preliminary measurements of the concentrations and size distributions of particles, (2) to evaluate alternative means for measuring the characteristics of aerosol particles in occupied houses, and (3) to make perliminary judgments about the sources of these particles. This work was conducted as part of the Particle Total Exposure Assessment Methodology (Particle-TEAM) Program under development by the U.S. Environmental Protection Agency.

CL-BIB-0460

TITLE: Measurement and Evaluation of Personal Exposure to Aerosols
STATUS: Started FY 88; ongoing
CONTACT: ORD/EMSL-RTP, Russell Wiener (919) 541-1910
CAS NO: CL-METAL, CL-SVOC, 54-11-5, CL-PM
CHEMICAL: METALLIC COMPOUNDS, SEMIVOLATILE ORGANIC COMPOUNDS, L-NICOTINE, PARTICULATE MATTER
PROJECT TYPE: Exposure Assessment, Source Assessment, Ambient Monitoring, Indoor Air Pollution
DESCRIPTION: The Particle Total Exposure Assessment Methodology (Particle-TEAM) Program is currently being developed by the U.S. Environmental Protection Agency (USEPA) to estimate the level of human exposure of particles and relate exposure to sources of aerosol matter. This program follows a sequence of TEAM programs designed to estimate everyday exposures to other potential hazards such as volatile organic compounds (VOCs). The Particle-TEAM program is focused on specific size fractions of aerosol particles analyzed for at least metals, nicotine, and as resources permit, semivolatile organics. A field study will be conducted to help determine the indoor aerosol particle size distribution and concentration spectrum.

CL-BIB-0462

TITLE: Recommended Methodology for the Measurement of Particulate Emission Including Condensables from Stationary Sources
STATUS: Ongoing; report due 2/89
CONTACT: ORD/EMSL-RTP, Thomas E. Ward (919) 541-3788
CAS NO: CL-PM
CHEMICAL: PARTICULATE MATTER
PROJECT TYPE: Ambient Monitoring
DESCRIPTION: A review of methods which have been used or proposed in the past for measuring condensable emissions for various non-regulatory purposes was conducted. Based on this review, recommendations for approaches both for measuring condensables apart from pre-existing particulate matter and inclusive of known sized particulate fractions were made to the EPA and a recommendation for the development of a specific method and protocol using an air dilution technique was made. The hardware for the selected approach is expected to be comparable to that of Method 5 in size and weight and to be capable of providing emissions data from standard isokinetic traverses of a stack.

CL-BIB-0463

TITLE: Classification of Mass Spectra of Toxic Compounds with an Inductive Expert System
STATUS: Ongoing
CONTACT: ORD/EMSL-RTP, Dr. Donald Scott (919) 541-7948
CAS NO: CL-ORGANIC
CHEMICAL: ORGANIC COMPOUNDS
PROJECT TYPE: Ambient Monitoring, Source Sampling
DESCRIPTION: The performance of an inexpensive, inductive rule-building expert system, 1ST-CLASS, using the ID3 algorithm was compared to that of SIMCA class modeling in classifying the binary mass spectra of 78 toxic and related compounds. The compressed mass spectra consisted of 17 masses chosen using information theory. The expert rules verified the six main classes and two subclasses found with SIMCA class modeling. In general, fewer masses were involved with the rules than with the SIMCA models, and the rules are normally optimized with regard to minimum number of steps in the rule, not minimum number of variables.

CL-BIB-0464

TITLE: Final Design and Evaluation of a Large Volume Size Fraction Sampler
STATUS: Ongoing
CONTACT: ORD/EMSL-RTP, Robert Burton (919) 541-3077
CAS NO: CL-ORGANIC, CL-PM
CHEMICAL: ORGANIC COMPOUNDS, PARTICULATE MATTER
PROJECT TYPE: Ambient Monitoring, Source Sampling
DESCRIPTION: The new high flow rate (40 CFM) Virtual Impactor has been subjected to a series of laboratory tests to evaluate precisely its cutpoint and particle loss characteristics. In addition, a new electronic volumetric flow controller coupled with a high efficiency induction motor have been designed to facilitate field sampling. Field tests by both the University of Minnesota and the U.S. EPA are planned to compare fractionated fine (0-2.5 um) and coarse (2.5-10um) mass loadings sampled by the Virtual Impactor to those masses collected by the existing low flow (16.7 liter/min) dichotomous sampler. Organic extraction and bioassay of test samples will be performed to determine the feasibility of employing the new sampler for collecting organic particulate during the next series of field studies conducted by the Integrated Air Cancer Program (IACP).

CL-BIB-0465

TITLE: Transformation of Boise Sources: The Production and Distribution of Mutagenic Compounds in Wood Smoke and Auto Exhaust
STATUS: Ongoing
CONTACT: ORD/ASRL-RTP, Larry Cupitt (919) 541-2878
CAS NO: CL-ORGANIC, CL-PM
CHEMICAL: ORGANIC COMPOUNDS, PARTICULATE MATTER
PROJECT TYPE: Source Sampling, Ambient Monitoring
DESCRIPTION: Emissions from the principal combustion sources in Boise (e.g., automobiles and wood smoke) have been shown to produce a wide variety of mutagenic compounds. These mutagenic species are associated with both the particulate-bound and the vapor phases. In the source emissions, most of the mutagenicity is associated with the particle-bound organics. Irradiation of the dilute exhaust materials in photo-chemical simulation chamber, however, increases the mutagenicity of the gas-phase pollutants substantially, suggesting that the overwhelming majority of the mutagenic burden may exist in the vapor phase.

CL-BIB-0466

TITLE: Mutagenicity of Organics Associated with PM-2.5 and PM-10 Hi-Vol Particulates from a Wood Smoke Impacted Residential Area
STATUS: Ongoing
CONTACT; OHR/HERL-RTP, Randall Watts (919) 541-2491
CAS NO: CL-ORGANIC, CL-WOOD
CHEMICAL: ORGANIC COMPOUNDS, WOOD SMOKE
PROJECT TYPE: Ambient Monitoring
DESCRIPTION: Particulate filters were collected from collocated PM-10 samplers with and without internal impactors, thereby producing parallel 0-2.5 and 0-10 micron samples. The filters were comparatively analyzed for percent extractable organics, mutagenicity concentration, and mutagenic potency of extracted organics. These ambient air samples were collected on Pall-flex(TM) filters during the 1985 IACP wood smoke study conducted in a residential area of Raleigh, NC. Eleven sample sets representing 11 sampling periods were selected for each type of sampler. These sampling periods had fine particle (0-2.5 micron) concentrations ranging from 11-129 micrograms per cubic meter. This preliminary particle size comparison study indicated that extractable organics and organic mutagens were primarily associated with the 0-2.5 micron particles.

CL-BIB-0467

TITLE: GC/MS Analysis of Stove Emissions and Ambient Samples from a Woodsmoke Impacted Area
STATUS: Ongoing
CONTACT: AEERL/ATRD/IPB, Raymond Steiber (919)541-2288
CAS NO: CL-PAH, CL-IAP, CL-METOXBZ
CHEMICAL: POLYCYCLIC AROMATIC COMPOUNDS, INDOOR AIR POLLUTANTS, METHOXYBENZENE COMPOUNDS
SOURCE: Woodstoves
PROJECT TYPE: Ambient Monitoring, Source Assessment, Indoor Air Pollution
DESCRIPTION: GC/MS analyses have been conducted on an integrated set of samples acquired to assess the impact of woodstoves on ambient air quality. The set includes stove emissions, ambient air, and samples from residences both with and without woodstoves. Stove emission and ambient air samples are dominated by the presence of methoxybenzenes which are the products of thermal decomposition of the lignin in the wood. Samples taken inside the residences are dominated by compounds typical of the materials used in the home and shoe little indication of the methoxybenzene compounds found in the woodstove emissions and ambient air samples.

CL-BIB-0468

TITLE: IAQ Risk Study Assessment
STATUS: Ongoing; report due 10/88
CONTACT: ORD/EMSL-RTP, David Holland (919) 541-3126
CAS NO: CL-VARIOUS
CHEMICAL: VARIOUS
PROJECT TYPE: Risk Assessment, Dispersion Modeling
DESCRIPTION: This project will determine information needed for a source category risk assessment, and develop the means to obtain this information. A model design study is scheduled for completion in May 1988.

CL-BIB-0469

TITLE: Indoor Dispersion/Ventilation Model
STATUS: Ongoing; complete 9/88
CONTACT: ORD/EMSL-RTP, David Holland (919) 541-3126
CAS NO: CL-IAP, CL-VARIOUS
CHEMICAL: INDOOR AIR POLLUTANTS, VARIOUS
PROJECT TYPE: Indoor Air Pollution, Dispersion Modeling
DESCRIPTION: This project will validate the NBS general indoor air quality model to ensure diagnostic capabilities of sick buildings. The model will be validated by July 1988.

CL-BIB-0470

TITLE: Protocols for Sick Building Syndrome Investigations
STATUS: Ongoing, report due 9/88
CONTACT: ORD/EMSL-RTP, David Holland (919) 541-3126
CAS NO: CL-IAP
CHEMICAL: INDOOR AIR POLLUTANTS
PROJECT TYPE: Indoor Air Pollution
DESCRIPTION: The purpose of this project is to develop technical assistance documents for sick building investigators.

CL-BIB-0471

TITLE: Low Cost Personal Monitoring Devices for Indoor Air
STATUS: Ongoing; complete 3/89
CONTACT: ORD/EMSL-RTP, Jim Mulik (919) 541-3067
CAS NO: CL-VOC, 50-00-0, 54-11-5, 10102-44-0
CHEMICAL: VOLATILE ORGANIC COMPOUNDS, FORMALDEHYDE, L-NICOTINE, NITROGEN DIOXIDE
PROJECT TYPE: Exposure Assessment
DESCRIPTION: The purpose of this project is to develop and evaluate low cost, comfortable personal monitoring and sampling devices that can be worn during normal activities.

CL-BIB-0472

TITLE: Compendium of Indoor Air Quality Measurement Methods
STATUS: Ongoing; complete 10/88
CONTACT: ORD/EMSL-RTP, Charles Rodes (919) 541-3079
CAS NO: CL-VOC, 54-11-5, CL-IAP
CHEMICAL: VOLATILE ORGANIC COMPOUNDS, L-NICOTINE, INDOOR AIR POLLUTANT
PROJECT TYPE: Indoor Air Pollution, Exposure Assessment
DESCRIPTION: The purpose of this project is to compile the most commonly used IAQ measurement methods for technical guidance documents. Nicotine and VOCs are in review now, with four other methods scheduled for completion in 1988. The methods are established, standard EPA methods and the final four will be assembled into one volume.

CL-BIB-0473

TITLE: Analysis of Semivolatile Compounds in Passive Air Samples by On-Line Supercritical Fluid Extraction/Gas Chromatography
STATUS: Ongoing; complete FY 89
CONTACT: ORD/EMSL-RTP, Nancy Wilson (919) 541-4723
CAS NO: CL-SVOC
CHEMICAL: SEMIVOLATILE ORGANIC COMPOUNDS
PROJECT TYPE: Ambient Monitoring
DESCRIPTION: On-line supercritical fluid extraction/gas chromatography (SFE/GC) provides an important alternative to Soxhlet extraction for the recovery of semivolatile organic compounds from adsorbents. The on-line extraction method concentrates the entire sample on the head of the GC column for analysis, avoiding the large dilution inherent in Soxhlet extraction. An on-line SFE/GC system has been constructed and tested for use with Tenax(TM)-filled passive air samplers. Optimization of extraction conditions, including the use of extraction fluids modified with organic solvents, has been investigated.

CL-BIB-0474

TITLE: Identification of the Composition of Source-Related Groups of Volatile Organics in Ambient and Indoor Air
STATUS: Ongoing
CONTACT: ORD/EMSL-RTP, William McClenny (919) 541-3158
CAS NO: CL-VOC
CHEMICAL: VOLATILE ORGANIC COMPOUNDS
PROJECT TYPE: Indoor Air Pollution, Ambient Monitoring
DESCRIPTION: Using new methodology for frequent sampling and analysis of volatile organics, essentially real-time monitoring for a large number of compounds is now possible. Repetitive hourly data of this type has been interpreted to reveal seven source factors, that is, groups of compounds that vary together, in the ambient air in an industrialized area near Richmond, Virginia. Identification of source factors in indoor air using similar time resolved data has also been demonstrated.

CL-BIB-0475

TITLE: Trace Metal Aerosol
STATUS: Ongoing
CONTACT: AEERL/CIAD/CRB, William Linak (919) 541-5792
CAS NO: CL-PM, CL-METAL
CHEMICAL: PARTICULATE MATTER, METALLIC COMPOUNDS
SOURCE: Incinerators
PROJECT TYPE: Source Sampling
DESCRIPTION: The purpose of this project is to study the formation and combustion formation of submicroaerosols and particulates from the incineration of metals.

CL-BIB-0476

TITLE: Indoor Air Pollution Mitigation Technology Research
STATUS: Ongoing
CONTACT: AEERL/CIAD/IAB, Leslie Sparks (919) 541-2458
CAS NO: CL-ORGANIC, CL-PM
CHEMICAL: ORGANIC COMPOUNDS, PARTICULATE MATTER
PROJECT TYPE: Indoor Air, Control Technology
DESCRIPTION: The overall concern is with organic and particulate indoor air pollutatns, focusing particularly on air cleaners and on determining air exchange rates. A complete evaluation of the efficiency available devices for collection of particles and organic vapors will be done. Improved designs will be developed and tested. Some general indoor air modeling work is also being performed.

CL-BIB-0477

TITLE: Dilution Sampling System
STATUS: Ongoing
CONTACT: AEERL/CIAD/CRB, Kenneth Nichols (919) 541-7663
CAS NO: CL-VARIOUS
CHEMICAL: HAZARDOUS AIR POLLUTANTS
SOURCE: Municipal Waste Combustors, Hazardous Waste Combustors
PROJECT TYPE: Source Sampling, Health Assessment
DESCRIPTION: The field team will collect samples from municipal waste combustion stacks (in-house) and from Dinoseb (insecticide/herbicide/hazardous waste) combustion. The sampler simulates what happens to emissions as they mix with ambient air and cool to ambient temperatures, and also analyzes the constituents. Bioassays will also be performed.

CL-BIB-0478

TITLE: Fundamental Radon Mitigation Studies
STATUS: Ongoing
CONTACT: AEERL/CIAD/IAB, Bruce Harris (919) 541-7807
CAS NO: 10043-92-2
CHEMICAL: RADON
PROJECT TYPE: Control Technology, Indoor Air
DESCRIPTION: This project will conduct laboratory studies of radon instrumentation, including testing sealants/paints for walls and ceilings.

CL-BIB-0479

TITLE: Sampling and Analysis Experiments for Products of Incomplete Combustion (PICs)
STATUS: Complete; report due FY 88
CONTACT: ORD/EMSL-RTP, Robert Fuerst (919) 541-2220
CAS NO: 107-06-2, 71-55-6, 79-01-6, 75-01-4, 75-35-4, 56-23-5, 74-87-3
CHEMICAL: 1,2-DICHLOROETHANE, 1,1,1-TRICHLOROETHANE, TRICHLOROETHENE, VINYL CHLORIDE, 1,1-DICHLOROETHENE, CARBON TETRACHLORIDE, CHLOROMETHANE
SOURCE: Incinerators
PROJECT TYPE: Source Sampling
DESCRIPTION: Sampling and analysis experiments were conducted to evaluate the Volatile Organic Sampling Train (VOST) methodology for incineration products of incomplete combustion (PIC's). A pilot scale incinerator was used under normal operating conditions to incinerate several volatile organic compounds separately. A quad VOST sampling apparatus was used to collect the samples for precision determinations, for distributive volume sampling, and for comparison between the standard Tenax/Charcoal and a new Carbotrap/Carbosieve SIII 20/45 mesh adsorbents.

CL-BIB-0480

TITLE: Preliminary Evaluation of Test Methods for Volatile Organics in Hazardous Waste
STATUS: Ongoing
CONTACT: OAQPS/TSD/EMB, Gary McAlister (919) 541-2237
CAS NO: 75-09-2, 78-93-3, 71-36-3, 110-86-1, 108-88-3, 540-84-1, 108-90-7, 108-95-2, 91-20-3
CHEMICAL: METHYLENE CHLORIDE, 2-BUTANONE, 1-BUTANOL, PYRIDINE, TOLUENE, ISOOCTANCE, CHLOROBENZENE, PHENOL, NAPHTHALENE
SOURCE: Hazardous Waste
PROJECT TYPE: Source Sampling
DESCRIPTION: Four test methods for determining the volatile emission potential of hazardous waste have been evaluated for predicting whether pretreatment of a waste is needed to remove volatile organic compounds prior to disposal. The test methods were: equilibrium headspace analysis, elevated temperature purge and trap, batch steam distillation and gravimetric purge and trap. Each test method was evaluated by preparing synthetic wastes that approximated the chemical and physical properties of six different waste categories. Recovery profiles, which are a measure of the recovery/removal efficiency of a test method, were used to compare one method to another.

CL-BIB-0481

TITLE: Quality Assurance for Measurement of Variables When Using Proposed Method 5G for Wood Heater Certification Testing
STATUS: Ongoing
CONTACT: ORD/EMSL-RTP, Thomas Ward (919) 541-3788
CAS NO: CL-PM
CHEMICAL: PARTICULATE MATTER
SOURCE: Wood Heaters
PROJECT TYPE: Source Sampling
DESCRIPTION: The U.S. EPA has proposed New Source Performance Standards (NSPS) for particulate emissions from wood-burning heaters which require that new wood heaters be tested to demonstrate compliance with the regulation's emission limits. The proposed regulation permits testers to choose one of several emission sampling approaches. For reasons of cost and relative ease of performance, the sampling method predicted to be used most often is EPA Method 5G. This project evaluates the most critical source of potential error in the sampling and analytical measurements which are used to determine emissions and of the Quality Assurance measures necessary to determine quality of the data produced.

CL-BIB-0482

TITLE: Interpretation of Field Performance Audit Data in Woodstove Emission Measurement Programs
CONTACT: ORD/AEERL, Judith Ford (919) 541-2550
CAS NO: CL-WOOD
CHEMICAL: WOOD SMOKE
SOURCE: Woodstoves
PROJECT TYPE: Ambient Monitoring, Source Assessment
DESCRIPTION: Over two heating seasons, the U.S. EPA, the New York Energy Research and State Development Authority (NYSERDA), and the Coalition of Northeast Governors (CONEG) conducted a study of the efficiency of four woodstove technologies: stoves equipped with integral catalytic combustors, low-emission non-catalytic stoves, retrofit catalyst woodstove, and conventional woodstoves. Three principal performance parameters were examined in the study: emissions characteristics, wood-use characteristics, and creosote formation in flues. Audits were performed to assess the implementation of planned quality control activities and the performance of measurement systems.

CL-BIB-0483

TITLE: Evaluation of Sampling Methods for Measuring Ethylene Oxide Emissions from Sterilization Chambers and Control Units and Determining Control Unit Efficiency
STATUS: Ongoing
CONTACT: ORD/EMSL-RTP, John Margeson (919) 541-2848
CAS NO: 75-21-8
CHEMICAL; ETHYLENE OXIDE
SOURCE: Sterilization Chambers
PROJECT TYPE: Source Sampling, Control Technology
DESCRIPTION: The U.S. EPA is currently considering the development of regulations to control ethylene oxide (EtO) emissions from commercial sterilization facilities. Thereuring EtO emissions must be established. The method fore, a reliable sampling and analysis method for measuring EtO emissions must be established. The method must be capable of measuring total EtO emissions and must be applicable to determining the efficiency of EtO control devices. Measurement of EtO emissions from commercial sterilization facilities is not a straightforward process. The EtO is emitted from the chamber or control unit intermittently, and the emissions vary in intensity and EtO content. A semi-continuous direct sampling procedure applicable to commercial sterilization facilities was evaluated in the field.

CL-BIB-0484

TITLE: Air Emissions from Hazardous Waste Stabilization
STATUS: Ongoing
CONTACT: EPA/HWERL-CIN, Paul De Percin (513) 569-7797
CAS NO: CL-VOC
CHEMICAL: VOLATILE ORGANIC COMPOUNDS
SOURCE: Hazardous Waste
PROJECT TYPE: Emission Factor, Control Technology
DESCRIPTION: Volatile organic compound (VOC) emissions from the stabilization process of hazardous wastes and from the stabilized wastes themselves were measured. Parametric studies measuring the VOC emissions from two types of synthetic hazardous wastes, which were solidified with two different types of binders under various conditions were studied. A Control Technology Guideline is in preparation. Field testing of commercial systems will be carried out in FY 89.

CL-BIB-0485

TITLE: Products of Incomplete Combustion (PICs) in Rotary Kiln Simulator
STATUS: Ongoing
CONTACT: AEERL/CIAD/CRB, Paul Lemieux (919) 541-0962
CAS NO: CL-VOC, CL-VARIOUS
CHEMICAL: VOLATILE ORGANIC COMPOUNDS, VARIOUS
SOURCE: Waste Incineration
PROJECT TYPE: Source Sampling
DESCRIPTION: The project examines the emission of products of incomplete combustion from simulated waste incineration in a batch mode in a rotary kiln.

CL-BIB-0487

TITLE: Studies on the VOC Analytical method by the Use of a TOC Analyzer
STATUS: Ongoing
CONTACT: ORD/EMSL-RTP, Jimmy Pau (919) 541-3680
CAS NO: CL-VOC
CHEMICAL: VOLATILE ORGANIC COMPOUNDS
PROJECT TYPE: Source Sampling
DESCRIPTION: The gas-liquid counter-current dynamic impinger is being investigated as an alternative to EPA Method 25 in stationary source sampling for volatile organic compounds (VOCs). The impinger method offers the following advantages over the sampling approach used in Method 25: (1) a continuous sampling process, constantly being replenished with source gas and fresh purging liquid, (2) ability to provide concentration data during the sampling process, and (3) potential for automation of the sampling process. The dynamic impinger sampling system separates mixtures of gases into purgeable and nonpurgeable fractions.

CL-BIB-0488

TITLE: A Study of Products from the Photooxidation of Toluene Using MS/MS Analysis
STATUS: Ongoing
CONTACT: ORD/ASRL-RTP, Larry Cupitt (919) 541-2878
CAS NO: 108-88-3
CHEMICAL: TOLUENE
PROJECT TYPE: Source Sampling
DESCRIPTION: A 5.1 ppm toluene/0.9 ppm NOx mixture was irradiated in a 22.7 m3 Teflon smog chamber operated in a dymanic mode. The effluent from this mixture was passed (at 150 L/min) to a triple quadrupole MS/MS operated in an atmospheric pressure ionization mode. Many of the ring-fragmentation products were identified using this technique and estimates of their concentration were made using structurally similar standards. Several major organic products were also quantitated using GC and HPLC. Under the conditions employed approximately half of the reacted carbon could be accounted for by the observed oxygenated products. Mechanisms for several of the product paths will be examined.

CL-BIB-0489

TITLE: Background and Status of the Computerized Accidental Release Planning System
STATUS: Ongoing
CONTACT: AEERL/ATRD/IPB, Jane Bare (919) 541-1528
CAS NO: CL-VARIOUS
CHEMICAL: VARIOUS
PROJECT TYPE: Accident Prevention/Emergency Response
DESCRIPTION: The Superfund Amendments and Reauthorization Act (SARA) contains Title III Sections 301-303 which seek to improve local chemical emergency response capabilities by allowing citizens and local emergency planning committees (LEPCs) to obtain information about extremely hazardous chemicals in their communities. EPA published a list of 406 acutely hazardous substances complete with Threshold Planning Quantities (TPQs). The facilities handling these chemicals in quantities greater than the TPQs are required to submit information to the LEPCs. This computerized system allows the communities the ability to handle the volume of incoming data. Pre-programmed searches are written to make the system user-friendly. This system also allows LEPCs to use a quick and approximate dispersion model which will enable them to determine vulnerability areas.

CL-BIB-0490

TITLE: Monitoring Ambient Air for Dioxins
STATUS: Ongoing
CONTACT: EPA Region VII, Billy Fairless (919) 236-2800
CAS NO: CL-DIOXIN
CHEMICAL: DIOXINS
PROJECT TYPE: Ambient Monitoring
DESCRIPTION: Many of the superfund sites that contain dioxin contamination are located in Missouri. Region VII, U.S. EPA, started clean-up operations at these sites several years ago. We expect the process to continue for many years into the future. Procedures developed primarily by others were used to monitor ambient air during the initial phases of clean-up operations. These procedures have continued to be evaluated and improved. Monitoring procedures, reasons why changes have been made in the procedures, estimates of data quality and monitoring costs, and areas where additional improvements might be feasible in the future are considered.

CL-BIB-0491

TITLE: Parametric Testing for Municipal Waste Combustion at Marion County, Oregon
STATUS: Ongoing
CONTACT: OAQPS/TSD/EMB, Gene Riley (919) 541-5242
CAS NO: CL-DIOXIN, CL-FURAN, 7647-01-0
CHEMICAL: DIOXINS, FURANS, HYDROGEN CHLORIDE
SOURCE: Municipal Waste Combustors
PROJECT TYPE: Source Sampling, Control Technology
DESCRIPTION: The principal objectives of the Parametric Test Program are: (1) to evaluate the control efficiency of the QR/FF system on organic emissions (CDD/CDF) during combustor shutdown and startup procedures, (2) to evaluate the variation in QR/FF acid gas control as a function of control device operating temperature and lime stolchiometric ratio, and (3) to evaluate the control efficiency of the QR/FF system over the normal operating range of the combustor.

CL-BIB-0492

TITLE: Automated Analysis of Multicomponent Compressed Gas Mixtures Containing Parts Per Billion Concentration of Toxic Organic Compounds
STATUS: Ongoing
CONTACT: ORD/EMSL-RTP, Darryl VonLehmden (919)541-2415
CAS NO: CL-ORGANIC
CHEMICAL: ORGANIC COMPOUNDS
PROJECT TYPE: Source Sampling
DESCRIPTION: Compressed gas cylinders containing trace levels of toxic organic compounds are made available to agency personnel (Federal, State, and local) and their contractors for auditing ambient and source emission measurements. The current inventory consists of cylinders containing either five, six, eight, nine or eighteen compounds in a balance gas of nitrogen. Quantitative analysis of each cylinder mixture by gas chromatography with flame ionization detection is performed initially upon receipt from the manufacturer and then periodically to recertify each component's concentration and to provide a measure of compound concentration stability.

CL-BIB-0493

TITLE: Design, Develop and Deliver Three Prototype Systems for Radon Measurement
STATUS: Ongoing
CONTACT: AEERL/CIAD/IAB, Bruce Harris (919) 541-7807
CAS NO: 10043-92-2
CHEMICAL: RADON
PROJECT TYPE: Indoor Air
DESCRIPTION: The purpose of this project is to design and develop prototype systems for radon measurement instrumentation.

CL-BIB-0494

TITLE: Statistical Properties of Hourly Concentrations of Volatile Organic Compounds at Baton Rouge, Louisiana
STATUS: Ongoing
CONTACT: OAQPS, William Hunt, Jr. (919) 541-5558
CAS NO: CL-HCARB
CHEMICAL: HYDROCARBONS
PROJECT TYPE: Ambient Monitoring
DESCRIPTION: Ambient concentrations of sixteen species of hydrocarbons and halogenated hydrocarbons are measured hourly. Concentrations are extremely variable, ranging from zero to several hundred times the median concentration. The upper tail can be approximated by a lognormal distribution. Significant variations in concentrations with time of day, season and wind direction are observed, but these effects account for little of the variability in the concentrations. The results have implications for the design of toxic monitoring programs with less frequent sampling.

CL-BIB-0495

TITLE: Analysis of Toxic Organic Vapors in Air Using a Portable Photoionization Gas Chromatograph
STATUS: Ongoing
CONTACT: ORD/EMSL-RTP, Richard Berkley (919) 541-2439
CAS NO: 71-43-2, 79-01-6, 108-88-3, 127-18-4, 108-90-7, 100-41-4, 1330-20-7
CHEMICAL: BENZENE, TRICHLOROETHYLENE, TOLUENE, TETRACHLOROETHYLENE, CHLOROBENZENE, ETHYLBENZENE, XYLENES
PROJECT TYPE: Ambient Monitoring
DESCRIPTION: Initial attempts to use a Photovac 10S50 portable photoionization gas chromatograph as a screen device for organic vapors in ambient air were only partially successful because of several problems peculiar to analysis at low levels. The Photovac 10S50 was operated as a mobile screening unit during a two-week study in Richmond and Hopewell, VA. It was also operated as a stationary automatic sampling device during a three-day study in Staten Island, NY. Results obtained in these studies were in reasonable agreement with other methods and demonstrated the effectiveness of this instrument as a rapid screening device and its ability to produce quick, reliable results.

CL-BIB-0496

TITLE: Method for Determination of Polychlorinated Dibenzo-p-dioxins and Dibenzofurans in Stack Gas Emissions and Ambient Air
STATUS: Ongoing; complete 9/89
CONTACT: ORD/EMSL-RTP, Robert Harless (919) 541-2248
CAS NO: CL-DIOXIN, CL-FURAN
CHEMICAL: POLYCHLORINATED DIBENZO-P-DIOXINS, POLYCHLORINATED DIBENZO FURANS
SOURCE: Incinerators
PROJECT TYPE: Ambient Monitoring, Source Sampling
DESCRIPTION: The quality assurance procedures, extraction and clean-up procedures and high resolution gas chromatography-high resolution mass spectrometry method of analysis used for determination of tetra through octa polychlorinated dibenzo-p-dioxins (PCDDs) and dibenzofurans (PCDFs) in numerous types of sample matrices are studied. The findings of picogram to microgram amounts of PCDDs and PCDFs in stack gas emissions (4 hour tests/M5 trains) of specific types of combustion and incineration processes are considered. These procedures and methods are being used for determination of PCDDs and PCDFs in ambient air samples. The stringent measures incorporated into sampling, analysis and evaluation of validity and significance of analytical data achieved for ambient air samples are being examined.

CL-BIB-0497

TITLE: Baltimore Total Exposure Assessment Methodology (TEAM) VOC Study
STATUS: Ongoing
CONTACT: ORD/EMSL-RTP, William Nelson (919) 541-2301
CAS NO: CL-VOC
CHEMICAL: VOLATILE ORGANIC COMPOUNDS
PROJECT TYPE: Exposure Assessment, Indoor Air, Ambient Monitoring
DESCRIPTION: The Baltimore area was chosen to apply the TEAM approach in a metropolitan area not having major petrochemical industry facilities, as did previously-studied CA and NJ areas. Selection of this new study area provided an opportunity for more extensive application of the canister sampler for fixed indoor and outdoor air samples. The main objectives were to estimate population exposure to selected VOCs, compare indoor, outdoor, and personal exposures, and to coordinate the exposure monitoring data collection with the IEMP field study. Final results will include determination of the impact of outdoor air on indoor air and personal exposure. Models will be developed to describe these relationships.

CL-BIB-0498

TITLE: New Studies of Population Exposure to VOCs and Major Sources of Exposure
STATUS: Ongoing
CONTACT: ORD/EMSL-RTP, William Nelson (919) 541-2301
CAS NO: CL-VOC, 8006-61-9, 106-46-7, CL-HCARB, 127-18-4
CHEMICAL: VOLATILE ORGANIC COMPOUNDS, GASOLINE VAPORS, AROMATIC HYDROCARBONS, TETRACHLOROETHYLENE, PARA-DICHLOROBENZENE
PROJECT TYPE: Exposure Assessment, Indoor Air, Source Sampling
DESCRIPTION: The U.S. EPA has carried out two studies of human exposure to VOCs. A study in Los Angeles, CA investigated personal exposures, indoor and outdoor air concentrations, and concentrations in exhaled breath of 25 target chemicals for 50 residents selected using a probability-based sampling procedure. The second study investigated suspected sources of several target chemicals in eleven homes in Bayonne and Elizabeth, NJ. Attached garages as a source of gasoline vapors, smoking as a source of aromatic hydrocarbons and respirable particulates, wearing and storing dry-cleaned clothes as a source of tetrachloroethylene, and air fresheners and moth crystals as a source of para-dichlorobenzene were studied.

CL-BIB-0499

TITLE: Effectiveness of Various Surface Coatings in Reducing Low Pressure-Driven Influx of Radon Through Concrete Block Basement Walls
STATUS: Started FY 87; ongoing
CONTACT: AEERL-RTP/CIAD/IAB, John Ruppersberger (919) 541-2432
CAS NO: 10043-92-2
CHEMICAL: RADON
PROJECT TYPE: Indoor Air, Control Technology
DESCRIPTION: A new facility at AEERL, the Indoor Radon Lab, has been designed to evaluate the effect of coatings in basements in preventing/deterring the passage of radon into the homes. Coatings included paints and damp-proofing materials routinely in use. No coatings development is planned. Data collection has begun (May 1988).

CL-BIB-0500

TITLE: Characterization of Emissions from a Hexachlorocyclopentadiene Manufacturer in Memphis, TN
STATUS: Ongoing; report in progress
CONTACT: EPA Region IV, Sharon Porter (404) 347-2864
CAS NO: 77-47-4
CHEMICAL: HEXACHLOROCYCLOPENTADIENE
SOURCE: Hexachlorocyclopentadiene manufacturing
PROJECT TYPE: Source Assessment, Exposure Assessment
DESCRIPTION: A preliminary evaluation of emissions from this source was performed under the EPA high risk source program. A subsequent risk assessment suggests that further studies of the facility be done. EPA has offered funds for follow-up to the State and local agencies, who have accepted them.

CL-BIB-0501

TITLE: Follow-on Radon Measurements in 40 Eastern Pennsylvania Houses Using Radon Reduction Techniques
STATUS: Started FY 88; report in progress; due Fall '88
CONTACT: AEERL/CIAD/IAB, Bruce Henschel (919) 541-4112
CAS NO: 10043-92-2
CHEMICAL: RADON
PROJECT TYPE: Indoor Air, Control Technology
DESCRIPTION: The study is designed to determine how well mitigation techniques continue to work over time. Data, therefore, have been collected for the second year of use of the control. Data collection is complete.

CL-BIB-0502

TITLE: Evaluation of Refrigerant from Mobile Air Conditioners
STATUS: Started 3/30/88; complete 9/30/88
CONTACT: AEERL/ATRD/IPB, Dale Harmon (919) 541-2429
CAS NO: CL-CFC
CHEMICAL: CHLOROFLUOROCARBONS
SOURCE: Automobiles
PROJECT TYPE: Source Assessment, Control Technology
DESCRIPTION: This project will involve the collection of samples from automobile air conditioners. Normally vented to the atmosphere during service, the objective is to recycle refrigerant. The study will characterize the impurities in the refrigerant, evaluate regeneration of spent refrigerant for purity and attempt to determine the maximum impurities that will not damage the system if the refrigerant is reused. These data will be used to develop a standard efficiency that regeneration processes must meet.

CL-BIB-0503

TITLE: Survey of CFC Destruction Techniques
STATUS: Started 3/88; complete 9/10/88
CONTACT: AEERL/ATRD/IPB, Dale Harmon (919) 541-2429
CAS NO: CL-CFC
CHEMICAL: CHLOROFLUOROCARBONS
PROJECT TYPE: Control Technology
DESCRIPTION: The objective of the project is to establish a panel of experts to identify possible destruction techniques applicable to CFC control.

CL-BIB-0504

TITLE: Investigation of the Blaze Icing KEJ1101 (Catalytic Woodstove) Operating Characteristics
STATUS: Started 12/9/87; report due 11/25/88
CONTACT: AEERL/CIAD/IAB, Robert McCrillis (919) 541-2733
CAS NO: CL-WOOD
CHEMICAL: WOOD SMOKE
SOURCE: Woodstove
PROJECT TYPE: Indoor Air, Source Sampling, Source Assessment
DESCRIPTION: After three field studies and one laboratory study, this particular model seems to have the tendency toward fouling in the damper area. The current project is investigating this to determine the reason for this occurrence.

CL-BIB-0505

TITLE: Emission Testing of a Mass Burn Combustor Using an ESP/Spray Dryer Control System
STATUS: Started 8/1/87; complete 12/30/87; report in preparation
CONTACT: AEERL/ATRD/ATCB, Charles Masser (919) 541-7586
CAS NO: CL-DIOXIN, CL-FURAN, 7647-01-0, CL-METAL
CHEMICAL: DIOXINS, FURANS, HYDROGEN CHLORIDE, METALLIC COMPOUNDS
SIOUCE: Municipal waste combustor - mass burn
PROJECT TYPE: Source Sampling, Source Assessment, Control Technology
DESCRIPTION: The purpose of the sampling is to evaluate emissions from a controlled combustor using a combination control set up of an ESP and Spray Dryer.

CL-BIB-0506

TITLE: Investigation of Environmental Tobacco Smoke for Particulate Phase Marker Compounds Using Multi-dimensional Gas Chromatography
STATUS: Ongoing
CONTACT: EMSL, Stanley Kopczynski (919) 541-3066
CAS NO: 32162-64-4, 486-56-6, 15569-85-4, CL-ETS
CHEMICAL: COTININE, ENVIRONMENTAL TOBACCO SMOKE
SOURCE: Environmental tobacco smoke
PROJECT TYPE: Indoor Air
DESCRIPTION: A multidimensional gas chromatographic procedure was developed for the analysis of air particles for the tobacco alkaloid, cotinine, and other candidate marker compounds. Analyses were conducted of air samples collected in controlled laboratory smoking expeiments and in private residences. Analyses of the indoor air samples showed that cotinine in a domestic environment can be readily detected and measured. Results support cotinine as a potential marker compound for environmental tobacco smoke particulate matter.

CL-BIB-0507

TITLE: Indoor Air Source Data Base
STATUS: Ongoing; complete FY 88
CONTACT: AEERL/CIAD/IAB, James White (919) 541-1189
PROJECT TYPE: Indoor Air, Emission Factor Document
DESCRIPTION: Data have been collected during this project from the literature and in house EPA projects on indoor air. Both emission rates from various sources and emission factors are presented. The data base will be compatible with an IBM AT and DOS. Periodic updates are planned, as well as the possible inclusion of Canadian data. These data will arise from the literature, Agency research, and other users' research. Caveat: no quality assurance has been performed on the data.

CL-BIB-0508

TITLE: Odors in Indoor Environments
STATUS: Ongoing
CONTACT: EMSL-RTP/MDAD/MDB, James Mulik (919) 541-4459
CAS NO: CL-IAP, CL-ODOR
CHEMICAL: INDOOR AIR POLLUTANT, ODORS
PROJECT TYPE: Indoor Air
DESCRIPTION: In this project, odor information in indoor studies will be collected and assessed by reviewing relevant knowledge in the literature, using measurement techniques including sensory and chemical analyses, and evaluating odor thresholds and detection levels. In addition, effects of indoor odors including health effects, irritation and stress, general nuisance, and human responses will be studied along with indoor odor control which will cover preventive controls, abatement, and controls by masking or modification.

CL-BIB-0509

TITLE: Design Change of NO2 Electrochemical Personal Exposure Monitor (PEM)
STATUS: Ongoing
CONTACT: EMSL-RTP/MDAD/MDB, James Mulik (919) 541-4459
CAS NO: 10102-44-0
CHEMICAL: NITROGEN DIOXIDE
PROJECT TYPE: Indoor Air
DESCRIPTION: In this project, engineering and design changes will be examined for the NO2 Electrochemical PEM to consolidate the data logger, battery pack, and electrochemical sensor into one compact single unit with the ability to data log concentration in real time for later handling. In addition, sensors and circuit boards will be fabricated for the unit and operational software will be selected and implemented.

CL-BIB-0510

TITLE: Determine Effect of Temperature Variation on NO2 Passive Sampling Device (PSD)
STATUS: Ongoing
CONTACT: EMSL-RTP/MDAD/MDB, James Mulik (919) 541-4459
CAS NO: 10102-44-0
CHEMICAL: NITROGEN DIOXIDE
DESCRIPTION: In this project, commercially available NO2-PSDs will be examined in triplicate in an NO2 exposure chamber at 5 temperature regions for 22-hr. intervals for 3 days. Tentative temperatures selected for the study are: -10 degrees F, 40 degrees F, 60 degrees F, and 100 degrees F. The sensors will be subjected to both a winter cycle (-10 degrees F, 40 degrees F, 67 degrees F) and a summer cycle (67 degrees F, 80 degrees F, 100 degrees F). Results will be analyzed using ion chromotography.

CL-BIB-0511

TITLE: Biomarkers for Assessing Body Burden from Exposure to Toxic Environmental Pollutants
STATUS: Ongoing
CONTACT: EMSL-RTP/MDAD/MDB, James Mulik (919) 541-4459
CAS NO: CL-VOC
CHEMICAL: VOLATILE ORGANIC COMPOUNDS
PROJECT TYPE: Indoor Air
DESCRIPTION: The actual body burden of airborne toxic chemicals resulting from all routes of human exposure cannot be determined by traditional techniques which only measure the concentrations in air. Human exposure has been related to biological endpoints in several studies using biochemical markers. If such exposures can be related to blood levels and ultimately to body burden, then the feasibility of using noninvasive techniques for assessing health risk becomes attractive. Preliminary chamber studies in the laboratory have shown that subjects exposed to selected volatile organics at near-normal ambient levels give measurable expired-air decay rates for elimination. These preliminary results can be used to correlate with the primary biomarkers which are directly related to biological endpoints and are more closely related to health risk.

CL-BIB-0512

TITLE: Develop Analytical Method for VOCs in Whole Blood
STATUS: Ongoing
CONTACT: EMSL-RTP/MDAD/MDB, James Mulik (919) 541-4459
CAS NO: CL-VOC
CHEMICAL: VOLATILE ORGANIC COMPOUNDS
PROJECT TYPE: Indoor Air
DESCRIPTION: Three techniques will be studied. Two are direct techniques using GCs and precolumns containing different materials (one strong H-bonding substrate, one anhydrous material) at different operating conditions. The third is an indirect technique that passes the blood sample through a Spandex/Tenax AC column. The VOCs are desorbed using a solvent rinse and thermal desorption techniques, then separated and quantified off a capillary column.

CL-BIB-0513

TITLE: Chemical Ionization Mass Spectrometry for Trace-Level Determination of Ambient Polar Volatile Organic Compounds
STATUS: Ongoing
CONTACT: EMSL-RTP/MDAD/MDB, James Mulik (919) 541-4459
CAS NO: CL-VOC
CHEMICAL: VOLATILE ORGANIC COMPOUNDS
PROJECT TYPE: Indoor Air
DESCRIPTION: No sampling/analytical technique currently exists in the Agency for unambiguous determination of ambient levels of a broad range of polar VOCs. This is primarily due to the difficulty in sampling and analyzing these compounds. This project will examine the feasibility of using a Finnegan MAT ITD with the CI source option, recently available commercially for measuring health-related polar VOCs. This equipment is expected to be both sensitive (picograms) and specific (GC-MS), a tool around which methodology can be developed.

CL-BIB-0514

TITLE: Chamber Exposure Studies (Blood-Breath)
STATUS: Ongoing
CONTACT: EMSL-RTP/MDAD/MDB, James Mulik (919) 541-4459
PROJECT TYPE: Indoor Air, Exposure Assessment
DESCRIPTION: There is increasing interest in assessing human exposure, body burden, and health risk resulting from environmental exposure to toxic air pollutants in order to evaluate possible acute and/or chronic health effects. By analyzing exhaled air, the rate of elimination of volatile organic compounds (VOCs) in the breath should give valuable information about the uptake, metabolism, and elimination of such compounds. In this project, four subjects will be exposed to "naturally occurring" elevated levels of various pollutants to permit the measurement of breath concentrations of selected VOCs as a function of time with a greater degree of reliability. At the same time, blood samples will be collected to obtain information on the blood/breath ratios of the compounds of interest.

CL-BIB-0515

TITLE: Field Evaluation of Sampling and Analysis for Organic Pollutants in Indoor Air
STATUS: Ongoing; draft final report 11/27
CONTACT: EMSL-RTP/MDAD/MDB, Joachim Pleil (919) 541-4680
CAS NO: CL-PAH, 54-11-5
CHEMICAL: POLYCYCLIC AROMATIC COMPOUNDS, NICOTINE
PROJECT TYPE: Indoor Air, Toxicity Testing
DESCRIPTION: To evaluate field sampling and analysis for organic pollutants in indoor air, this project will develop a study plan, perform a winter field study, analyze sample extracts, prepare extracts for microbioassay, and conduct a statistical analysis of the analytical and biological data.

CL-BIB-0516

TITLE: Chemical Fractionation and Analysis of China Coal Combustion Emission Samples
STATUS: Ongoing
CONTACT: EMSL-RTP/MDAD/MDB, Joachim Pleil (919) 541-4680
CAS NO: CL-WOOD
CHEMICAL: WOOD SMOKE
PROJECT TYPE: Indoor Air, Toxicity Testing
DESCRIPTION: In this project, a cyano semi-prep HPLC column used to fractionate a smoky coal sample extract will be evaluated, bioassay-directed HPLC will be performed, and chemicals in the sample extract will be evaluated in an attempt to identify unknown mutagens or carcinogens.

CL-BIB-0517

TITLE: A High-Efficiency, High-Volume Compound Annular Denuder Sampler for Phase-Distributed Semi-Volatile Organic Chemicals
STATUS: Ongoing
CONTACT: EMSL-RTP/MDAD/MDB, Joachim Pleil (919) 541-4680
CAS NO: CL-SVOC
CHEMICAL: SEMI-VOLATILE ORGANIC COMPOUNDS
PROJECT TYPE: Ambient Monitoring
DESCRIPTION: The objectives of this project are to develop and evaluate a high-volume compound annular denuder (HVCAD) sampler for phase-distributed organics; to determine its performance under field conditions; and to utilize this sampler to expand the existing data base on phase distribution of semi-volatile organic chemicals (SVOC).

CL-BIB-0518

TITLE: Personal Sampling Device (PSD) Modification and Analysis
STATUS: Ongoing
CONTACT: EMSL-RTP/MDAD/MDB, Joachim Pleil (919) 541-4680
CAS NO: CL-VOC
CHEMICAL: VOLATILE ORGANIC COMPOUNDS
PROJECT TYPE: Source Sampling
DESCRIPTION: In this project, the current version of the SIS PSD will be evaluated for its potential conversion to a low-rate PSD, and standard SIS PSDs will be cleaned and then analyzed for VOCs in support of an intercomparison study being conducted at Yale University.

CL-BIB-0519

TITLE: Development of a Mass Spectral Identification Scheme for Electron Impact Spectra of Volatile Compounds
STATUS: Ongoing
CONTACT: EMSL-RTP/MDAD/MDB, Joachim Pleil (919) 541-4680
CAS NO: CL-VOC
CHEMICAL: VOLATILE ORGANIC COMPOUNDS
PROJECT TYPE: Ambient Monitoring
DESCRIPTION: In this project, the Hewlett Packard's (HP's) PBM mass spectral library searching software that is currently used with HP's mass selective detector (MSD) system will be evaluated. A list of volatile organic compounds that occur in urban air will be evaluated and organized by class. The PBM library software will be challenged with mixtures containing known compounds to demonstrate the effectiveness of the searching technique. If the searching technique is proven to be more effective than the current library searching capabilities on the MSD system, then new software will be installed into the EMSL system.

CL-BIB-0520

TITLE: VOCs Samplers for Superfund Site Applications
STATUS: Ongoing
CONTACT: EMSL-RTP/MDAD/MDB, Joachim Pleil (919) 541-4680
CAS NO: CL-VOC
CHEMICAL: VOLATILE ORGANIC COMPOUNDS
PROJECT TYPE: Ambient Monitoring
DESCRIPTION: In this project, several factors concerning whole-air sampling near Superfund sites will be studied. These include wind speed and direction dependent sampling, spatial integrative sampling, time-resolved sampling, and in-field preconcentration sampling.

CL-BIB-0521

TITLE: Statistical Comparison of Results of Two Indoor Air Pilot Studies
STATUS: Ongoing; draft final report 3/88
CONTACT: EMSL-RTP/MDAD/MDB, Joachim Pleil (919) 541-4680
CAS NO: CL-PAH
CHEMICAL: POLYCYCLIC AROMATIC HYDROCARBON
PROJECT TYPE: Indoor air
DESCRIPTION: In this project, the indoor PAH and PAH derivatives from two pilot field studies will be compared to determine whether the results from the two studies are consistent.

CL-BIB-0522

TITLE: Design and Preliminary Evaluation of a Low Flow Rate Indoor Air Sampler
STATUS: Ongoing
CONTACT: EMSL-RTP/MDAD/MDB, Joachim Pleil (919) 541-4680
PROJECT TYPE: Indoor Air, Source Sampling
DESCRIPTION: The purpose of this project is to design, construct, and perform the initial evaluation of an indoor air sampler which can operate unattended in a residence for up to one week at a flow rate of 20 lpm, collecting samples on a filter and/or XAD sorbent trap and accommodate a small denuder.

CL-BIB-0523

TITLE: Field Evaluation of Methodology for Semi-Volatile Compounds
STATUS: Ongoing
CONTACT: EMSL-RTP/MDAD/MDB, Joachim Pleil (919) 541-4680
CAS NO: CL-SVOC, CL-VOC, CL-PAH, 10102-44-0
CHEMICAL: SEMI-VOLATILE ORGANIC COMPOUNDS, VOLATILE ORGANIC COMPOUNDS, POLYCYCLIC AROMATIC HYDROCARBONS, NITROGEN DIOXIDE
PROJECT TYPE: Indoor Air, Source Sampling, Source Assessment
DESCRIPTION: The objective of this project is to utilize the EPA prototype indoor sampler to further investigate the effects of normal residential heating and cooking modes on indoor concentrations of selected volatile organic compounds, PAH, and PAH derivatives. In addition, indoor NO2 is being evaluated as a potential contributor to indoor nitro-PAH levels.

CL-BIB-0524

TITLE: Multi-Sorbent Preconcentrator
STATUS: Ongoing
CONTACT: EMSL-RTP/MDAD/MDB, Joachim Pleil (919) 541-4680
CAS NO: CL-VOC
CHEMICAL: Ongoing
PROJECT TYPE: Source Sampling
DESCRIPTION: The purpose of this project is to eliminate the need for liquid nitrogen during on-site sampling and analysis, thereby making the use of EPA systems more practical in field and stationary site operation. As a result, compound resolution at the earlier retention times is lost; therefore, this project will also examine the use of new gas chromatographic column designs that have thick stationary phase coatings with extra retention capacity.

CL-BIB-0525

TITLE: Real-Time Formaldehyde Monitor
STATUS: Ongoing
CONTACT: EMSL-RTP/MDAD/MDB, Joachim Pleil (919) 541-4680
CAS NO: 50-00-0
CHEMICAL: FORMALDEHYDE
PROJECT TYPE: Source Sampling, Ambient Monitoring
DESCRIPTION: The objective of this project will be to develop real-time monitors for formaldehyde in air.

CL-BIB-0526

TITLE: Development of a Polar VOC Detector Based on Photo0 Induced Nucleation
STATUS: Ongoing
CONTACT: EMSL-RTP/MDAD/MDB, Joachim Pleil (919) 541-4600
CAS NO: CL-VOC, 50-00-0, 75-07-0, 98-95-3, 529-20-4
CHEMICAL: VOLATILE ORGANIC COMPOUNDS, FORMALDEHYDE, ACETALDEHYDE, NITROBENZENE, TOLUALDEHYDE
PROJECT TYPE: Source Sampling
DESCRIPTION: The project objective is to demonstrate the feasibility of application of the process of photo-induced nucleation (PIN) as a gas chromatographic detector for selected polar organics. Specific goals are to: (1) Demonstrate that a flow version of a diffusion cloud chamber can be coupled to a GC, (2) Demonstrate reliable detection and quantification of GC effluents resulting from typical ambient air samples, (3) Determine the useful range of applicability of the detector and the associated linearity of response, (4) Determine the PIN efficiency of formaldehyde, acetaldehyde, nitrobenzene and tolualdehyde.

CL-BIB-0527

TITLE: Installations and Measurements on Radon Demonstration Project Houses in Clinton, NJ
STATUS: Started 1/26/88; ongoing
CONTACT: AEERL/CIAD/IAB, Mike Osbourne (919) 541-4113
CAS NO: 10043-92-2
CHEMICAL: RADON
PROJECT TYPE: Indoor Air, Control Technology
DESCRIPTION: This study is a continuation of previous work that evaluated radon mitigation systems installed in Clinton, NJ.

CL-BIB-0528

TITLE: The Design and Installation of a Passive Radon Mitigation System
STATUS: Started 1/25/88; ongoing
CONTACT: AEERL/CIAD/IAB, Mike Osbourne (919) 541-4113
CAS NO: 10043-92-2
CHEMICAL: RADON
PROJECT TYPE: Indoor Air, Control Technology
DESCRIPTION: A passive mitigation system will be installed in the crawl space of a house located in Nashville, TN. The effectiveness of the device will be evaluated during this study.

CL-BIB-0529

TITLE: Study to Field Test and Demonstrate Radon Prevention Techniques on New Homes
STATUS: Started 7/31/87; to be completed 7/31/88
CONTACT: AEERL/CIAD/IAB, Mike Osbourne (919) 541-4113
CAS NO: 10043-92-2
CHEMICAL: RADON
PROJECT TYPE: Indoor Air, Control Technology
DESCRIPTION: This study will demonstrate the effectiveness of radon-resistant construction techniques in new houses.

CL-BIB-0530

TITLE: Preparation of a Radon/New Construction Report
STATUS: Started 4/4/88; to be completed 7/4/88
CONTACT: AEERL/CIAD/IAB, Mike Osbourne (919) 541-4113
CAS NO: 10043-92-2
CHEMICAL: RADON
PROJECT TYPE: Indoor Air, Regulatory Development Guidance
DESCRIPTION: The objective is to develop a manual that provides builders with information on a variety of techniques that are expected to be effective in decreasing potential radon accumulation in houses. In addition, legislators, regulators and residential building code writers may choose to evaluate radon-resistant techniques for potential application to or modification of existing regulations or codes applicable to residential construction.

CL-BIB-0531

TITLE: Monitoring the Effectiveness of Existing Radon Mitigation Techniques in Project Houses in Clinton, NJ
STATUS: Started 5/6/88; ongoing
CONTACT: AEERL/CIAD/IAB, Mike Osbourne (919) 541-4113
CAS NO: 10043-92-2
CHEMICAL: RADON
PROJECT TYPE: Indoor Air, Control Technology
DESCRIPTION: This study is a continuation of previous work that involved monitoring the effectiveness of radon mitigation techniques in Clinton, NJ, houses.

CL-BIB-0532

TITLE: Collection of Information on the Application of Radon-Resistant Construction Techniques in New Residential Housing Stock
STATUS: Started 2/25/88; ongoing
CONTACT: AEERL/CIAD/IAB, Mike Osbourne (919) 541-4113
CAS NO: 10043-92-2
CHEMICAL: RADON
PROJECT TYPE: Indoor Air, Control Technology
DESCRIPTION: The project will attempt to demonstrate the effectiveness of various radon-resistant construction techniques in new homes.

CL-BIB-0533

TITLE: Evaluation of Canister-Based Sampling in the TAMS Network
STATUS: Ongoing
CONTACT: EMSL-RTP/MDAD/MDB, Joachim Pleil (919) 541-4680
CAS NO: CL-VOC
CHEMICAL: VOLATILE ORGANIC COMPOUNDS
PROJECT TYPE: Ambient Monitoring
DESCRIPTION: In this project, 10 TAMS field monitoring stations (3 each in Houston, Boston, and Chicago; 1 in Seattle) will be provided with a clean evacuated canister. Also, 5 clean Tenax tubes will be provided only to the Houston Site #2. These field samples will be analyzed by GC/MSD for 41 toxic organic compounds. The resulting analytical and sampling data will be reported monthly to EPA in both hard copy and floppy disk format.

AK01 PROJECT 001

TITLE: EMISSIONS INVENTORY OF A PIPELINE MARINE TERMINAL
STATUS: Start Date - 06/88 Expected Completion - 11/88
CONTACT: AK BILL MACCLARENCE (907) 563-6529
CAS NO: CL-VOC
CHEMICAL: VOLATILE ORGANIC COMPOUNDS
SOURCE: MARINE TERMINAL
PROJECT TYPE: AMBIENT MONITORING, EMISSION FACTOR, HEALTH ASSESSMENT
DESCRIPTION: THIS EMISSIONS INVENTORY FOR VOLATILE ORGANIC COMPOUNDS (VOCS) WILL BE CONDUCTED BY THE FACILITY. DATA WILL ENABLE THE AGENCY TO ASSESS THE HEALTH IMPACTS OF AN EMISSION SOURCE OF APPROXIMATELY 30 TONS PER HOUR.

CA03-001

TITLE: ANALYSIS OF AMBIENT AIR TOXICS DATA FROM POTENTIAL "HOT SPOTS" IN THE SOUTH COAST AIR BASIN.
STATUS: Start Date - 05/86 Expected Completion - 06/88
CONTACT: CA-SCAQMD DIDAS SHIKIYA (818) 572-2119
CHEMICAL: VARIOUS
PROJECT TYPE: AMBIENT MONITORING
DESCRIPTION: OBJECTIVE OF THIS PROJECT TO IDENTIFY AREAS WITH HIGH CONCENTRATION OF MULTIPLE TOXIC AIR POLLUTANTS BY MONITORING AMBIENT CONCENTRATIONS. TWENTY POLLUTANTS WERE MEASURED AT TEN SITES IN THE BASIN FOR 15 SAMPLING DAYS EACH (NOT NECESSARILY CONSECUTIVE) DURING TWO SAMPLING PERIODS (SUMMER/FALL 1986 AND WINTER/SPRING 1987). DATA ANALYSIS WOULD CONSIDER COMPARISON WITH OTHER AMBIENT AIR TOXICS NETWORK IN THE BASIN.

CA03-002

TITLE: IN-VEHICLE AIR TOXICS CHARACTERIZATION STUDY IN THE SOUTH COAST AIR BASIN
STATUS: Start Date - 02/87 Expected Completion - 06/88
CONTACT: CA-SCAQMD DITAS SHIKIYA (818) 572-2119
CHEMICAL: VARIOUS
SOURCE: AUTOMOBILE
PROJECT TYPE: EXPOSURE ASSESSMENT
DESCRIPTION: THE OBJECTIVE OF THIS STUDY IS TO DETERMINE THE RELATIVE CONTRIBUTION OF IN-VEHICLE EXPOSURE TO AN INDIVIDUAL'S TOTAL EXPOSURE TO AIR TOXICS IN AN URBANIZED AREA WHICH HAS A HIGHLY AUTOMOBILE DEPENDENT POPULATION AND LONG AVERAGE COMMUTING DISTANCES. A NUMBER OF MEASURES WILL BE IDENTIFIED FROM THE FIELD LOG DATA WHICH COULD REDUCE INDIVIDUAL COMMUTERS EXPOSURE TO AIR TOXICS WHILE DRIVING.

CA03-003

TITLE: REGIONAL AIR TOXICS AND RISK ASSESSMENT MODEL ENVIRONMEN
STATUS: Start Date - 05/88 Expected Completion -
CONTACT: CA-SCAQMD MARK SAPERSTEIN (818) 572-2118
PROJECT TYPE: RISK ASSESSMENT, EXPOSURE ASSESSMENT
DESCRIPTION: THE SCAQMD RISK AND ASSESSMENT MODEL USED IN A PREVIOUS STUDY (DOC. NO. CA0395012) WILL BE ENHANCED TO ACCOUNT FOR (1) MOBILITY, (2) MI- CROENVIRONMENTS, AND (3) MULTI-MEDIA EXPOSURE. THE ENHANCEMENT WILL INCORPORATE THE TREATMENT OF DURATION AND CONCENTRATION EXPOSURE TO AMBIENT, IN-DOOR, AND IN-VEHICLE MICROENVIRONMENTS, AND MECHANISMS TO INCLUDE PARAMETERS FOR MULTI-MEDIA EXPOSURE AND RISK ASSESSMENT.

CA03-004

TITLE: AMBIENT MEASUREMENT AND MODELING OF FORMALDEHYDE CONCENTRATIONS IN THE SOUTH COAST AIR BASIN
STATUS: Start Date - Expected Completion -
CONTACT: CA-SCAQMD DITAS SHIKIYA (818) 572-2119
CAS NO: 50-00-0
CHEMICAL: FORMALDEHYDE
PROJECT TYPE: AMBIENT MONITORING, DISPERSION MODELING
DESCRIPTION: A ONE-YEAR MONITORING PROGRAM WITH A NETWORK OF 4-6 SITES WILL BE ESTABLISHED IN THE BASIN. A DISPERSION MODEL WHICH SIMULATES THE TRANSPORT TRANSFORMATION AND DISPERSION OF HCHO WILL BE DEVELOPED. THE MODEL SHOULD BE ABLE TO PREDICT ANNUAL AVERAGE HCHO CONCENTRATIONS AS A RESULT OF EMISSIONS OF HCHO, REACTIVE ORGANIC GASES, NITROGEN OXIDES AND METHANOL.

CA03-005

TITLE: MULTI-PATHWAY HEALTH RISK ASSESSMENT INPUT PARAMETERS GUIDANCE DOCUMENT
STATUS: Start Date - Expected Completion -
CONTACT: CA-SCAQMD WAYNE ZWIACHER (818) 572-6264
PROJECT TYPE: EXPOSURE ASSESSMENT, RISK ASSESSMENT
DESCRIPTION: THIS DOCUMENT WILL DESCRIBE METHODOLOGIES THAT CAN BE USED TO CONDUCT THE EXPOSURE ASSESSMENT COMPONENT OF A MULTIPATHWAY HEALTH RISK ASSESSMENT FOR AIR EMISSIONS SOURCES. RANGE OF PARAMETERS THAT CAN BE USED IN SUCH ASSESSMENTS WILL BE REVIEWED AND ALGORITHMS FOR ESTIMATING EXPOSURES WILL BE PRESENTED.

FL02 KPDT0001

TITLE: 1987-1988 NMOC/NOX SUMMER STUDY (AMBIENT MONITORING)
STATUS: Start Date - 06/87 Expected Completion - 10/88
CONTACT: FL-JACKSON SIBYL CARLEY (904) 630-3666
CAS NO: 10102-44-0, CL-NMHC
CHEMICAL: NITROGEN OXIDE, NON-METHANE HYDROCARBONS
PROJECT TYPE: AMBIENT MONITORING
DESCRIPTION: PROJECT NO. KPDT0001 REPRESENTS AMBIENT MONITORING PROGRAMS BEING RUN CONCURRENTLY AT TWO DIFFERENT SITES. KP_ KOOKER PARK AND DT_ NCNB BANK BUILDING, DOWNTOWN.

MD01 01

TITLE: AIR TOXICS REGULATION DEVELOPMENT
STATUS: Start Date - 06/85 Expected Completion - 09/88
CONTACT: MD SUSAN WIERMAN (301) 225-5240
PROJECT TYPE: REGULATIONS OR RULES
DESCRIPTION: HEARINGS SCHEDULED FOR JUNE 88.

MO01 MONITORING 1

TITLE: URBAN AIR TOXICS PROGRAM
STATUS: Start Date - 10/88 Expected Completion - 09/89
CONTACT: MO RANDY RAYMOND (314) 751-4817
CAS NO: 108-88-3, 1330-20-7, 50-00-0, 71-43-2, 71-55-6, etc.
CHEMICAL: VARIOUS
PROJECT TYPE: AMBIENT MONITORING
DESCRIPTION: AMBIENT MONITORING STUDY FOR SITE IN DOWNTOWN ST LOUIS.

MO01 RULES 1

TITLE: PERMIT RULE FOR NON-CRITERIA POLLUTANTS
STATUS: Start Date - 11/87 Expected Completion - 08/88
CONTACT: MO TODD CRAWFORD (314) 751-4817
CHEMICAL: NON-CRITERIA POLLUTANTS
PROJECT TYPE: REGULATIONS OR RULES
DESCRIPTION: AMENDMENTS TO CURRENT PERMIT RULE BEING DEVELOPED FOR CONTROL OF NON-CRITERIA POLLUTANTS.

MT01 WESTVERM

TITLE: WESTERN VERMICULITE PERMIT REVIEW
STATUS: Start Date - 10/87 Expected Completion - 06/88
CONTACT: MT ROBERT RAISCH (406) 444-3454
CAS NO: 1332-21-4
CHEMICAL: ASBESTOS
SOURCE: VERMICULITE MINE
PROJECT TYPE: EXPOSURE ASSESSMENT, RISK ASSESSMENT
DESCRIPTION: WESTERN VERMICULITE HAS SUBMITTED A PERMIT APPLICATION FOR A VERMICULITE MINE AND EXFOLIATION PLANT. THE FACILITY REQUIRES A STATE PERMIT BUT IS EXEMPT FROM PSD REVIEW. THE ORE BODY CONTAINS A SMALL BUT UNQUANTIFIED AMOUNT OF ASBESTOS. THE PROJECT INVOLVES (1) QUANTIFYING THE AMOUNT OF ASBESTOS IN THE ORE, (2) QUANTIFYING ASBESTOS EMISSIONS, (3) EXPOSURE ASSESSMENT, AND (4) RISK ASSESSMENT.

NY01 PROJECT 001

TITLE: STRATEGIES FOR CONTROLLING THE OXIDANT PROBLEM IN MAJOR URBAN AREAS
STATUS: Start Date - 08/87 Expected Completion - 07/89
CONTACT: NY DR. S.T. RAO (518) 457-3200
CAS NO: 10028-15-6, 10102-44-0, CL_PCO, CL_VOC
CHEMICAL: OZONE, VOLATILE ORGANIC COMPOUNDS
PROJECT TYPE: CASE STUDY, DISPERSION MODELING, SOURCE ASSESSMENT
DESCRIPTION: VARIOUS CONTROL STRATEGIES REQUIRED TO MEET AND MAINTAIN OZONE NAAQS ARE EVALUATED WITH THE URBAN AIRSHED MODEL. ALSO, THE DYNAMICS OF OZONE CONCENTRATIONS IN THE NEW YORK METROPOLITAN AREA ARE EVALUATED.

OH01 DIOXIN D001

TITLE: SOURCES, OCCURRENCE AND EFFECTS OF DIOXINS AND DIBENZOFURANS IN OHIO'S ENVIRONMENT
STATUS: Start Date - 08/87 Expected Completion - 06/88
CONTACT: OH PAUL KOVAL (614) 481-4310
CAS NO: 1746-01-6, 3268-87-9, 34465-46-8, 35822-46-9, 51207-31-9
CHEMICAL: DIOXINS, DIBENZOFURANS
PROJECT TYPE: AMBIENT MONITORING, EXPOSURE ASSESSMENT, HEALTH ASSESSME RISK ASSESSMENT
DESCRIPTION: A LITERATURE SEARCH DETERMINED POTENTIAL SOURCES OF DIOXIN (TCDD) AND DIBENZOFURANS (TCDF) CONTRIBUTING TO THE AMBIENT AIR. SAMPLING WAS CONDUCTED AT 4 SITES IN THE STATE USING MEDIUM VOLUME SAMPLERS AND PUF (POLY-URETHANE) FOAM. THE SAMPLES WERE ANALYZED (WITH BLANKS) FOR 15 2,3,7,8 ISOMERS AND TOTAL PENTA-, HEXA-, HEPTA-, AND OCTA- TCDD/TCDFS. THE COGENER PROFILES OF SOURCES WILL BE COMPARED TO OHIO AMBIENT DATA. A HEALTH RISK ASSESSMENT WILL BE PERFORMED USING THE AMBIENT DATA.

OH04 RADON STUDY '86

TITLE: RADON CONCENTRATION STUDY - TOLEDO AREA
STATUS: Start Date - 06/86 Expected Completion - 12/90
CONTACT: OH-TOLEDO RICK USCILOWSKI (419) 693-0350
CAS NO: 10043-92-2
CHEMICAL: RADON
PROJECT TYPE: INDOOR AIR, SOURCE ASSESSMENT
DESCRIPTION: ONGOING STUDY TO DETERMINE RADON CONCENTRATIONS IN BUILDINGS IN NORTHWEST OHIO USING TRACK ETCH METHOD WITH EXPOSURES OF ONE MONTH TO ONE YEAR.

OK01 PROJECT 2.3

TITLE: OKLAHOMA AIR POLLUTION CONTROL REGULATION 2.3 (REVISION)
STATUS: Start Date - 02/88 Expected Completion 12/88
CONTACT: OK N.P. COLEMAN (405) 271-5220
SOURCE: INCINERATOR
PROJECT TYPE: REGULATIONS OR RULES
DESCRIPTION: REVISION OF EXISTING INCINERATOR REGULATION TO ADDRESS PATHOLOGICAL, HOSPITAL WASTE, MUNICIPAL WASTE AND HAZARDOUS WASTE INCINERATION.

OR01 PROJECT 001

TITLE: FIELD AND SLASH BURNING PESTICIDE IMPACT STUDY
STATUS: Start Date - 07/86 Expected Completion - 06/88
CONTACT: OR GREGG LANDE (503) 229-6411
CAS NO: CL-HERB
CHEMICAL: HERBICIDES
SOURCE: COMBUSTION
PROJECT TYPE: AMBIENT MONITORING, SOURCE ASSESSMENT
DESCRIPTION: HERBICIDES ARE COMMONLY APPLIED TO LOGGING AND GRASS SEED HARVEST RESIDUES PRIOR TO BURNING TO AID COMBUSTION. THE PRIMARY OBJECTIVE OF THE STUDY WAS TO DETERMINE IF HERBICIDE RESIDUES, OR COMBUSTION PRODUCTS WERE PRESENT IN THE SMOKE. SECONDARY OBJECTIVES INCLUDED SEMIQUANTITATIVE ANALYSIS FOR AN ARRAY OF TOXIC AIR POLLUTANTS AND MEASUREMENT OF PM10 CONCENTRATIONS AT POTENTIAL RECEPTOR SITES.

VT01 RUTLAND RRF01

TITLE: RUTLAND RESOURCE RECOVERY FACILITY SITE-SPECIFIC ENVIRONMENTAL ASSESSMENT
STATUS: Start Date - 11/87 Expected Completion - 08/88
CONTACT: VT BRIAN FITZGERALD (802) 244-8731
CAS NO: 1746-01-6, 51207-31-9, 7439-92-1, 7439-97-6, 7440-02-0, 7440-38-2, 7440-41-7, 7440-43-9, 7440-47-3
CHEMICAL: VARIOUS
SOURCE: INCINERATOR
PROJECT TYPE: AMBIENT MONITORING, CASE STUDY, EXPOSURE ASSESSMENT, SOURCE ASSESSMENT
DESCRIPTION: THE STATE OF VERMONT IS PERFORMING A SITE-SPECIFIC ASSESSMENT TO DEVELOP INFORMATION ON TOXIC CONTAMINANTS EMITTED BY A MUNICIPAL WASTE INCINERATOR. THE ASSESSMENT WILL BE A MULTI-POLLUTANT, MULTI-MEDIA EFFORT TO ESTABLISH LEVELS OF TOXIC CONTAMINANTS IN VARIOUS ENVIRONMENTAL MEDIA. THE RUTLAND MWC SELECTED FOR STUDY CONSISTS OF MODERATELY SIZED INCINERATORS, EACH WITH A REFRACTORY LINED FURNACE AND A SEPERATE WASTE HEAT BOILER (120 TPD CAP. EA.).

WA02 PSAPCA 10

TITLE: JORGENSEN STEEL BAGHOUSE CHROMIUM EMISSIONS
STATUS: Start Date - 09/87 Expected Completion - 12/87
CONTACT: WA-PUGET FRED AUSTIN (206) 344-7334
CAS NO: 7440-47-3
CHEMICAL: CHROMIUM
SOURCE: METAL PRODUCTS
PROJECT TYPE: EMISSION FACTOR, SOURCE SAMPLING
DESCRIPTION: CHROMIUM (CR) EMISSIONS AVERAGED .00427 GM/SEC. HEXAVALENT CHROMIUM (CR+6) WAS NOT DETECTABLE. THE NOISE LEVEL OF CR+6 WAS .00018 GM/SEC THE CR EMISSION FACTOR WAS .00372 LB CR PER TON STEEL. THIS SOURCE HAD VERY LOW EMISSIONS.

WA02 PSAPCA 7

TITLE: RECEPTOR MODELING FEASIBILITY STUDY
STATUS: Start Date - 12/86 Expected Completion - 12/87
CONTACT: WA-PUGET JIM NOLAN (206) 344-7355
PROJECT TYPE: SOURCE ASSESSMENT
DESCRIPTION: THIS STUDY DETERMINED THE FEASIBILITY OF USING ORGANIC COMPOUNDS IN COMBINATION WITH INORGANIC COMPOUNDS TO IMPROVE THE PERFORMANCE OF CHEMICAL MASS BALANCE RECEPTER MODELS.

WA02 PSAPCA 8

TITLE: URBAN AIR TOXICS MITIGATION STUDY - PHASE I
STATUS: Start Date - 02/87 Expected Completion - 06/88
CONTACT: WA-PUGET HAYDENE MAYKUT (206) 344-7335
CAS NO: CL-WOOD
CHEMICAL: WOOD SMOKE
SOURCE: WOODSTOVE
PROJECT TYPE: AMBIENT MONITORING, EXPOSURE ASSESSMENT, AIR TOXICS PROGRAM SUPPORT DOCUMENT
DESCRIPTION: AIR SAMPLING WAS CONDUCTED AT A RESIDENTIAL SITE HIGHLY IMPACTED BY WOODSMOKE AND AN INDUSTRIAL SITE. SAMPLES WILL BE ANALYZED BY XRF, CARBON ANALYSIS AND GC/MS.

WA02 PSAPCA 9

TITLE: WYNDVALLEY - DEVELOPMENT OF A NONGUIDELINE AIR STAGNATION DIFFUSION MODEL
STATUS: Start Date - 09/87 Expected Completion - 06/89
CONTACT: WA-PUGET G.S. PADE (206) 344-7355
PROJECT TYPE: DISPERSION MODELING
DESCRIPTION: WE WERE REQUIRED BY EPA REGION X TO USE A NONGUIDELINE MODEL, WYNDVALLEY, FOR SIP DEVELOPMENT. WE RECEIVED OUR FIRST VERSION (2.0) IN LATE OCTOBER, 1987. NUMEROUS PROBLEMS HAVE BEEN FOUND AND CORRECTED. THE CURRENT VERSION(2.11) STILL HAS SOME MAJOR PROBLEMS AND WE ARE WORKING WITH WYNDSOFT TO CORRECT THESE.

WY01 PROJECT 001

TITLE: SURVEY OF WOOD USE FOR RESIDENTIAL WOODBURNING IN SHERIDAN AND LANDER, WYOMING
STATUS: Start Date - 01/88 Expected Completion - 06/88
CONTACT: WY BERNARD DAILEY (307) 777-7391
CAS NO: CL-WOOD
CHEMICAL: WOOD SMOKE
SOURCE: WOODSTOVE
PROJECT TYPE: SOURCE ASSESSMENT
DESCRIPTION: MAILED OUT SURVEY FORM REQUESTING INFORMATION OF QUANTITY OF WOOD BURNED, TYPE OF COMBUSTION UNIT, POLLUTION CONTROL, ETC. FROM RESIDENTS. MAY BE USED WITH AVAILABLE EMISSION FACTORS TO DETERMINE EMISSIONS OF HAZARDOUS COMPONENTS OF WOOD SMOKE.

WY01 PROJECT 002

TITLE: ASSESSMENT OF EMISSIONS FROM ADJACENT INDUSTRIES IMPACTING THE BROOKHURST SUBDIVISION, NATRONA COUNTY, WYOMING
STATUS: Start Date - 06/88 Expected Completion - 12/88
CONTACT: WY TERESA PERKINS (307) 777-7391
CAS NO: 108-88-3, 1330-20-7, 71-43-2, 7647-01-0, 7664-93-9, 7783-06-4
CHEMICAL: VARIOUS
SOURCE: OIL AND GAS, PETROLEUM REFINING
PROJECT TYPE: SOURCE ASSESSMENT
DESCRIPTION: THIS PROJECT INVOLVES INVENTORY OF EMISSIONS IMPACTING THE BROOKHURST SUBDIVISION FROM ADJACENT INDUSTRIES. POINT AND FUGITIVE EMISSIONS AND POTENTIAL CONTROL OPTIONS WILL BE EVALUATED.

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Chemical-Specific Manuals for Accidental Releases and Hazard Identification Systems (CL-BIB-0320)

Air Toxic Accidental Release Prevention Reference Manual - Mitigation Technology (CL-BIB-0321)

Ambient Air Toxics Monitoring - Methods Development and Sample Analysis (CL-BIB-0352)

Special Urban Monitoring Program (CL-BIB-0353)

Reportable Quantities Regulations (CL-BIB-0354)

Interpreted Role of Federally Permitted Releases (CL-BIB-0355)

CL-VARIOUS (VARIOUS) (cont.)

Air Toxic Emission Factor Compilation (CL-BIB-0357)

Urban Air Toxics Program (CL-BIB-0359)

Field Testing of Municipal Waste Combustors (CL-BIB-0362)

Integrated Risk Information System (IRIS) (CL-BIB-0363)

Controlling Air Toxics (CAT) Version 2.0 (CL-BIB-0365)

Tier II, Stage 2 Modeling Improvements (CL-BIB-0368)

Ooms/DEGARID Modeling Improvements (CL-BIB-0369)

Investigation, Documentation and Testing of a Proposed Wet Deposition and Related Algorithms to ISC Models (CL-BIB-0370)

Measurement of Exposures During Firefighting (CL-BIB-0375)

Reproposal of Regulation for Boilers, Industrial Furnaces, and Incinerators That Use Hazardous Waste as Fuel (CL-BIB-0386)

Tiered Control for Accidental Releases (CL-BIB-0387)

Studies on Toxicity Applicable to Risk Assessment (STARA) (CL-BIB-0390)

Source Category Parameters (CL-BIB-0391)

The Toxic Interaction Database (CL-BIB-0392)

SARA Title IV Report to Congress (CL-BIB-0393)

Workbook of Models for Screening Air Toxics (CL-BIB-0398)

Archive and Evaluate Selected Air Toxics Dispersion Models (CL-BIB-0399)

Toxic Chemical Testing for Assessment/Quality Assurance for Toxic Substances (CL-BIB-0400)

Toxic Chemical Testing for Assessment Exposure Monitoring Systems Development (CL-BIB-0401)

Validation of the Flux Chamber Method for Impoundment Pond Emissions (CL-BIB-0404)

Case-Control Survey to Test Hypotheses Generated by Computer Maps (CL-BIB-0414)

CL-VARIOUS (VARIOUS) (cont.)

Analysis of Health Interview Survey Data (CL-BIB-0415)

TEAM Study: Indoor Air; Particle Study (CL-BIB-0419)

Mutagenicity of Individual Indoor Air Mixtures (CL-BIB-0422)

Integrated Environmental Management Project (CL-BIB-0423)

Study of Exposure to Anti-Microbials (CL-BIB-0432)

Inert Ingredients in Pesticides (CL-BIB-0433)

Study of Enhanced Enforcement to Control Air Toxics (CL-BIB-0446)

General Quantitative Risk Assessment Guidelines for Non-Carcinogenic Health Effects Data (CL-BIB-0448)

Northeast Cooperative Woodstove Study - Phase II (CL-BIB-0452)

IAQ Risk Study Assessment (CL-BIB-0468)

Indoor Dispersion/Ventilation Model (CL-BIB-0469)

Dilution Sampling System (CL-BIB-0477)

Products of Incomplete Combustion (PICs) in Rotary Kiln Simulator (CL-BIB-0485)

Background and Status of the Computerized Accidental Release Planning System (CL-BIB-0489)

CL-VOC (VOLATILE ORGANIC COMPOUNDS)

Destruction of VOC/Hazardous Air Pollutant (HAP) Emissions via Catalytic Incineration (CL-BIB-0116)

Field Assessment of Steam VOC Removal Efficiencies (CL-BIB-0140)

New York State Stack Sampling of Resource Recovery Plants (CL-BIB-0146)

Engineering Study: Standards Development for Hazardous Waste Treatment, Storage, and Disposal Facilities (CL-BIB-0257)

Toxics Air Monitoring Systems (TAMS) (CL-BIB-0286)

Development of Ambient Methods for Hazardous Waste (CL-BIB-0288)

Evaluation of HAP Controls under Transient Conditions (CL-BIB-0332)

CL-VOC (VOLATILE ORGANIC COMPOUNDS) (cont.)

VOC and Hazardous Air Pollutant (HAP) Control of Department of Defense Facilities (CL-BIB-0335)

Vapor Phase Catalytic Oxidation of Mixed Volatile Organic Compounds (CL-BIB-0337)

Develop Dosimetry Models for VOC Hazard Identification (CL-BIB-0350)

Interim Air Toxics Data Base (CL-BIB-0351)

Investigation of Emissions from Burning of Agricultural Plastics (CL-BIB-0366)

Reproposal of Regulation for Boilers, Industrial Furnaces, and Incinerators That Use Hazardous Waste as Fuel (CL-BIB-0386)

Directory of State Contacts on Indoor Air Quality (IAQ) (CL-BIB-0397)

Validation of the Flux Chamber Method for Impoundment Pond Emissions (CL-BIB-0404)

Development of New Methods for SW846 (CL-BIB-0405)

Residential Wood Combustion and Automotive Emissions on the Boise, Idaho Air Shed (CL-BIB-0407)

TEAM Study: Indoor Air; 1982 Indoor Air Study of 2 Office Buildings (CL-BIB-0418)

Neurobehavioral and Sensory Irritant Effects of Complex VOC Mixtures in Humans (CL-BIB-0421)

Chamber Studies Characterizing the Organic Emissions from Kerosene Space Heaters: Phase II (CL-BIB-0449)

Low Cost Personal Monitoring Devices for Indoor Air (CL-BIB-0471)

Compendium of Indoor Air Quality Measurement Methods (CL-BIB-0472)

Identification of the Composition of Source-Related Groups of Volatile Organics in Ambient and Indoor Air (CL-BIB-0474)

Air Emissions from Hazardous Waste Stabilization (CL-BIB-0484)

Products of Incomplete Combustion (PICs) in Rotary Kiln Simulator (CL-BIB-0485)

CL-VOC (VOLATILE ORGANIC COMPOUNDS) (cont.)

Studies on the VOC Analytical Method by the Use of a TOC Analyzer (CL-BIB-0487)

Baltimore Total Exposure Assessment Methodology (TEAM) VOC Study (CL-BIB-0497)

New Studies of Population Exposure to VOCs and Major Sources of Exposure (CL-BIB-0498)

Biomarkers for Assessing Body Burden from Exposure to Toxic Environmental Pollutants (CL-BIB-0511)

Develop Analytical Method for VOCs in Whole Blood (CL-BIB-0512)

Chemical Ionization Mass Spectrometry for Trace-Level Determination of Ambient Polar Volatile Organic Compounds (CL-BIB-0513)

Personal Sampling Device (PSD) Modification and Analysis (CL-BIB-0518)

Development of a Mass Spectral Identification Scheme for Electron Impact Spectra of Volatile Compounds (CL-BIB-0519)

VOCs Samplers for Superfund Site Applications (CL-BIB-0520)

Field Evaluation of Methodology for Semi-Volatile Compounds (CL-BIB-0523)

Multi-Sorbent Preconcentrator (CL-BIB-0524)

Development of a Polar VOC Detector Based on Photo-Induced Nucleation (CL-BIB-0526)

Evaluation of Canister-Based Sampling in the TAMS Network (CL-BIB-0533)

STRATEGIES FOR CONTROLLING THE OXIDANT PROBLEM IN MAJOR URBAN AREAS (NY01 PROJECT 001)

CL-WELD (WELDING FUMES)

Prospective Epidemiologic Industrial Hygiene Study of Mild Steel Welders (CL-BIB-0202)

Retrospective Cohort Investigation of Non-Asbestos Welders (CL-BIB-0240)

CL-WOOD (WOOD SMOKE)

Integrated Air Cancer Project: Wood Stove Operating Profiles (CL-BIB-0128)

CL-WOOD (WOOD SMOKE) (cont.)

Analytical Methods Development for Toxic Substances (CL-BIB-0287)

Determining Woodstove Catalyst Emission Control Performance Degradation (CL-BIB-0329)

Study of the Effects of Appliance Type and Operating Variables on Residential Wood Combustion Emissions (CL-BIB-0330)

North West Woodstove Study (CL-BIB-0334)

Woodburning Survey (Colorado) (CL-BIB-0443)

Northeast Cooperative Woodstove Study - Phase II (CL-BIB-0452)

The Influence of Woodburning on the Mutagenicity of Air Outdoor and Indoors (CL-BIB-0457)

Mutagenicity of Organics Associated with PM-2.5 and PM-10 Hi-Vol Particulates from a Wood Smoke Impacted Residential Area (CL-BIB-0466)

Interpretation of Field Performance Audit Data in Woodstove Emission Measurement Programs (CL-BIB-0482)

Investigation of the Blaze Icing KEJ1101 (Catalytic Woodstove) Operating Characteristics (CL-BIB-0504)

Chemical Fractionation and Analysis of China Coal Combustion Emission Samples (CL-BIB-0516)

SURVEY OF WOOD USE FOR RESIDENTIAL WOODBURNING IN SHERIDAN AND LANDER, WYOMING (WY01 PROJECT 001)

CONTROL TECHNOLOGY DOCUMENT (CT)

EMISSIONS INVENTORY OF A PIPELINE MARINE TERMINAL (AK01 PROJECT 001)

Destruction of VOC/Hazardous Air Pollutant (HAP) Emissions via Catalytic Incineration (CL-BIB-0116)

Study to Define and Determine Mitigation Methods for Air Toxics in Puget Sound (CL-BIB-0297)

Development and Demonstration of Indoor Radon Reduction Measures for Homes (CL-BIB-0312)

Investigation of Radon Entry into Houses and Effectiveness of Mitigation Techniques - Evaluation Phase (CL-BIB-0317)

CONTROL TECHNOLOGY DOCUMENT (CT) (cont.)

Air Toxic Accidental Release Prevention Reference Manual - Mitigation Technology (CL-BIB-0321)

CFC Chemical Substitutes (CL-BIB-0324)

Determining Woodstove Catalyst Emission Control Performance Degradation (CL-BIB-0329)

Study of the Effects of Appliance Type and Operating Variables on Residential Wood Combustion Emissions (CL-BIB-0330)

VOC and Hazardous Air Pollutant (HAP) Control of Department of Defense Facilities (CL-BIB-0335)

Vapor Phase Catalytic Oxidation of Mixed Volatile Organic Compounds (CL-BIB-0337)

Chlordane/Radon Mitigation Project (CL-BIB-0338)

Locating and Estimating Air Emissions from Sources of Perchloroethylene and Trichloroethylene (CL-BIB-0356)

Locating and Estimating Air Emissions from Sources of 1,3-Butadiene (CL-BIB-0358)

Field Testing and Method Evaluation for Industrial Cooling Towers (CL-BIB-0360)

Field Testing and Method Evaluation of Chrome Electroplating Plants (CL-BIB-0361)

Field Testing of Municipal Waste Combustors (CL-BIB-0362)

Controlling Air Toxics (CAT) Version 2.0 (CL-BIB-0365)

House Evaluation Program (CL-BIB-0425)

Radon Demonstration Program (CL-BIB-0427)

Investigation of Radon Entry into Houses and Effectiveness of Mitigation Techniques - Evaluation Phase (CL-BIB-0442)

Phase I Development Demonstration of Mitigation for Florida Houses (CL-BIB-0447)

Indoor Air Pollution Mitigation Technology Research (CL-BIB-0476)

Fundamental Radon Mitigation Studies (CL-BIB-0478)

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Evaluation of Sampling Methods for Measuring Ethylene Oxide Emissions from Sterilization Chambers and Control Units and Determining Control Unit Efficiency (CL-BIB-0483)

Air Emissions from Hazardous Waste Stabilization (CL-BIB-0484)

Parametric Testing for Municipal Waste Combustion at Marion County, Oregon (CL-BIB-0491)

Effectiveness of Various Surface Coatings in Reducing Low Pressure-Driven Influx of Radon Through Concrete Block Basement Walls (CL-BIB-0499)

Follow-on Radon Measurements in 40 Eastern Pennsylvania Houses Using Radon Reduction Techniques (CL-BIB-0501)

Evaluation of Refrigerant from Mobile Air Conditioners (CL-BIB-0502)

Survey of CFC Destruction Techniques (CL-BIB-0503)

Emission Testing of a Mass Burn Combustor using and ESP/Spray Dryer Control System (CL-BIB-0505)

Installations and Measurements on Radon Demonstration Project Houses in Clinton, NJ (CL-BIB-0527)

The Design and Installation of a Passive Radon Mitigation System (CL-BIB-0528)

Study to Field Test and Demonstrate Radon Prevention Techniques on New Homes (CL-BIB-0529)

Monitoring the Effectiveness of Existing Radon Mitigation Techniques in Project Houses in Clinton, NJ (CL-BIB-0531)

Collection of Information on the Application of Radon-Resistant Construction Techniques in New Residential Housing Stock (CL-BIB-0532)

COBALT (7440-48-4)

URBAN AIR TOXICS PROGRAM (M001 MONITORING 1)

COKE OVEN EMISSIONS (CL-COE)

Coke Oven Emissions: Charging, Topside Leaks, Door Leaks NESHAP (CL-BIB-0012)

COPPER (7440-50-8)

Field Test Evaluation of a Methodology for Measuring Emissions of Selected Toxic Metals from Stationary Sources (CL-BIB-0455)

COPPER (7440-50-8) (cont.)
URBAN AIR TOXICS PROGRAM (M001 MONITORING 1)

COTININE (15569-85-4)
Investigation of Environmental Tobacco Smoke for Particulate Phase Marker Compounds Using Multidimensional Gas Chromatography (CL-BIB-0506)

COTTON DUST (CL-COTDUST)
Byssinosis Prevention (CL-BIB-0192)

Comparative Research in Analytical Pathology (CL-BIB-0216)

CURENE (101-14-4)
Investigation of Workers Exposed to MBOCA (CL-BIB-0225)

Epidemiologic and Industrial Hygiene Support of Toxic Substance Control Act - EPA (CL-BIB-0232)

Arylamine Adducts in Blood as Indicators of Exposure (CL-BIB-0304)

DIAMINOTOLUENE,2,4- (95-80-7)
Decision on Regulation of Air Emissions from Isocyanate Production Facilities (CL-BIB-0050)

DIBENZOFURAN (132-64-9)
Health Assessment Document for Polychlorinated Dibenzofurans (CL-BIB-0064)

DICHLOROBENZENE,1,2- (95-50-1)
URBAN AIR TOXICS PROGRAM (M001 MONITORING 1)

DICHLOROBENZENE,1,3- (541-73-1)
URBAN AIR TOXICS PROGRAM (M001 MONITORING 1)

DICHLOROBENZENE,1,4- (106-46-7)
Decision on Regulation of Air Emissions from Isocyanate Production Facilities (CL-BIB-0050)

Paradichlorobenzene (Used in Moth Repellents and Air Fresheners) (CL-BIB-0436)

New Studies of Population Exposure to VOCs and Major Sources of Exposure (CL-BIB-0498)

URBAN AIR TOXICS PROGRAM (M001 MONITORING 1)

DICHLOROETHANE,1,1- (75-34-3)
URBAN AIR TOXICS PROGRAM (M001 MONITORING 1)

DICHLOROETHYLENE,1,1- (75-35-4)
Sampling and Analysis Experiments for Products of Incomplete Combustion (PICs) (CL-BIB-0479)

URBAN AIR TOXICS PROGRAM (M001 MONITORING 1)

DICHLOROETHYLENE,1,2-,CIS-TRANS- (540-59-0)
URBAN AIR TOXICS PROGRAM (M001 MONITORING 1)

DICHLOROPROPANE,1,2- (78-87-5)
URBAN AIR TOXICS PROGRAM (M001 MONITORING 1)

DICHLOROPROPENE,1,3- (542-75-6)
URBAN AIR TOXICS PROGRAM (M001 MONITORING 1)

DIESEL FUEL EMISSIONS (CL-DIESEL)
Occupational Lung Disease Associated with Exposure to Diesel Emissions (CL-BIB-0193)

Mortality of Diesel Exposed Miners (CL-BIB-0213)

Case-Control Study of Lung Cancer in Teamsters Union (CL-BIB-0242)

DIMETHOXYBENZIDINE,3,3'- (119-90-4)
o-Dianisidine and o-Tolidine Dye Workers Exposure Study (CL-BIB-0411)

DIMETHYLAMINE (124-40-3)
Decision on Regulation of Dimethylamine Under the Clean Air Act (CL-BIB-0269)

DIMETHYLBENZIDINE,3,3'- (119-93-7)
o-Dianisidine and o-Tolidine Dye Workers Exposure Study (CL-BIB-0411)

DIMETHYLFORMAMIDE,N,N- (68-12-2)
Dimethylformamide- NTP Chemical Manager (CL-BIB-0186)

DINITROTOLUENE,2,4- (121-14-2)
Decision on Regulation of Air Emissions from Isocyanate Production Facilities (CL-BIB-0050)

DIOXINS (CL-DIOXIN)
New York State Stack Sampling of Resource Recovery Plants (CL-BIB-0146)

Mortality of Dioxin Workers (CL-BIB-0226)

Morbidity and Reproductive Study of U.S. Chemical Workers (CL-BIB-0236)

DIOXINS (CL-DIOXIN) (cont.)
Dioxin Analysis of Hospital Incinerator Ash (CL-BIB-0292)

Investigation of Emissions from Burning of Agricultural Plastics (CL-BIB-0366)

Recommended Guidelines for Stack Testing at Municipal Waste Combustion Facilities (CL-BIB-0367)

Decision on Regulation of Dioxins/Furans Under the Clean Air Act (CL-BIB-0383)

Monitoring Ambient Air for Dioxins (CL-BIB-0490)

Parametric Testing for Municipal Waste Combustion at Marion County, Oregon (CL-BIB-0491)

Method for Determination of Polychlorinated Dibenzo-p-dioxins and Dibenzofurans in Stack Gas Emissions and Ambient Air (CL-BIB-0496)

Emission Testing of a Mass Burn Combustor using and ESP/Spray Dryer Control System (CL-BIB-0505)

DISPERSION MODELING (DM)
EMISSIONS INVENTORY OF A PIPELINE MARINE TERMINAL (AK01 PROJECT 001)

AMBIENT MEASUREMENT AND MODELING OF FORMALDEHYDE CONCENTRATIONS IN THE SOUTH COAST AIR BASIN (CA03-004)

Contra Costa Exposure Study (CL-BIB-0157)

Process Evaluation of Ambient Air Monitoring Near a Sugar Beet Processing Plant in Idaho (CL-BIB-0296)

Study to Define and Determine Mitigation Methods for Air Toxics in Puget Sound (CL-BIB-0297)

Tier II, Stage 2 Modeling Improvements (CL-BIB-0368)

Ooms/DEGARID Modeling Improvements (CL-BIB-0369)

Investigation, Documentation and Testing of a Proposed Wet Deposition and Related Algorithms to ISC Models (CL-BIB-0370)

Workbook of Models for Screening Air Toxics (CL-BIB-0398)

Archive and Evaluate Selected Air Toxics Dispersion Models (CL-BIB-0399)

IAQ Risk Study Assessment (CL-BIB-0468)

DISPERSION MODELING (DM) (cont.)
Indoor Dispersion/Ventilation Model (CL-BIB-0469)

STRATEGIES FOR CONTROLLING THE OXIDANT PROBLEM IN MAJOR URBAN AREAS (NY01 PROJECT 001)

WYNDVALLEY - DEVELOPMENT OF A NONGUIDELINE AIR STAGNATION DIFFUSION MODEL (WA02 PSAPCA 9)

DYES (CL-DYES)
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Field Assessment of Waste Pretreatment at Refinery Land Treatment Facilities (CL-BIB-0141)

Field Assessment of Fate of Organics in Aerated Treatment Systems (CL-BIB-0142)

Rhode Island Toxics Integration Project--Evaluation of Air Emissions from Sewage Treatment Plants (CL-BIB-0145)

New York State Stack Sampling of Resource Recovery Plants (CL-BIB-0146)

Engineering Study: Standards Development for Hazardous Waste Treatment, Storage, and Disposal Facilities (CL-BIB-0257)

Dioxin Analysis of Hospital Incinerator Ash (CL-BIB-0292)

Ambient Air Monitoring for PCBs in El Dorado, Arkansas (CL-BIB-0299)

Field Testing of Municipal Waste Combustors (CL-BIB-0362)

ELECTRIC, GAS, AND SANITARY SERVICES (49) (cont.)

Recommended Guidelines for Stack Testing at Municipal Waste Combustion Facilities (CL-BIB-0367)

Investigation, Documentation and Testing of a Proposed Wet Deposition and Related Algorithms to ISC Models (CL-BIB-0370)

Reproposal of Regulation for Boilers, Industrial Furnaces, and Incinerators That Use Hazardous Waste as Fuel (CL-BIB-0386)

Multimedia, Multipollutant Field Study to Establish Levels of Toxics Contained in Air, Soil, Sediments, Water and Agricultural Products from a Model Municipal Waste Combustor (CL-BIB-0389)

Performance Audit Results for POHC Testing During RCRA Trial Burns (CL-BIB-0403)

Particulate Matter-Organic Compounds Interactions on Municipal Incinerator Flyash (CL-BIB-0454)

Field Test Evaluation of a Methodology for Measuring Emissions of Selected Toxic Metals from Stationary Sources (CL-BIB-0455)

Laboratory Evaluation of a Test Method for Measuring Emissions of Selected Toxic Metals from the Incineration of Hazardous Materials (CL-BIB-0456)

Trace Metal Aerosol (CL-BIB-0475)

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Sampling and Analysis Experiments for Products of Incomplete Combustion (PICs) (CL-BIB-0479)

Products of Incomplete Combustion (PICs) in Rotary Kiln Simulator (CL-BIB-0485)

Parametric Testing for Municipal Waste Combustion at Marion County, Oregon (CL-BIB-0491)

Method for Determination of Polychlorinated Dibenzo-p-dioxins and Dibenzofurans in Stack Gas Emissions and Ambient Air (CL-BIB-0496)

OKLAHOMA AIR POLLUTION CONTROL REGULATION 2.3 (REVISION) (OK01 PROJECT 2.3)

RUTLAND RESOURCE RECOVERY FACILITY SITE-SPECIFIC ENVIRONMENTAL ASSESSMENT (VT01 RUTLAND RRF01)

ASSESSMENT OF EMISSIONS FROM ADJACENT INDUSTRIES IMPACTING THE BROOKHURST SUBDIVISION, NATRONA COUNTY, WYOMING (WY01 PROJECT 002)

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EMISSIONS INVENTORY OF A PIPELINE MARINE TERMINAL (AK01 PROJECT 001)

Acrolein Emissions Update (CL-BIB-0254)

Determining Woodstove Catalyst Emission Control Performance Degradation (CL-BIB-0329)

Study of the Effects of Appliance Type and Operating Variables on Residential Wood Combustion Emissions (CL-BIB-0330)

North West Woodstove Study (CL-BIB-0334)

Locating and Estimating Air Emissions from Sources of Perchloroethylene and Trichloroethylene (CL-BIB-0356)

Air Toxic Emission Factor Compilation (CL-BIB-0357)

Locating and Estimating Air Emissions from Sources of 1,3-Butadiene (CL-BIB-0358)

Assessment of Air Quality Impacts from Superfund Sites: Evaluation of Emissions During Site Cleanups (CL-BIB-0371)

Workbook of Models for Screening Air Toxics (CL-BIB-0398)

Chamber Studies Characterizing the Organic Emissions from Kerosene Space Heaters: Phase II (CL-BIB-0449)

Sources of Fine Particle Organic Matter in Boise (CL-BIB-0451)

Northeast Cooperative Woodstove Study - Phase II (CL-BIB-0452)

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STRATEGIES FOR CONTROLLING THE OXIDANT PROBLEM IN MAJOR URBAN AREAS (NY01 PROJECT 001)

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Cadmium NESHAP (CL-BIB-0010)

Coke Oven Emissions: Charging, Topside Leaks, Door Leaks NESHAP (CL-BIB-0012)

Asbestos NESHAP Revision (CL-BIB-0018)

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Chromium NESHAP (CL-BIB-0020)

EPA-State Pilot Project For the Control of Acrylonitrile Emissions (CL-BIB-0027)

Estimating Exposure to Arsenic, Beryllium, Cadmium, Chromium, and Nickel From Coal and Oil Combustion (CL-BIB-0029)

Exposure/Risk Assessment on Air Emissions From Treatment, Storage and Disposal Facilities (CL-BIB-0030)

Decision on Regulation of Acetaldehyde Under The Clean Air Act (CL-BIB-0034)

Decision on Regulation of Acrolein Under the Clean Air Act (CL-BIB-0035)

Decision on Regulation of Ammonia Under the Clean Air Act (CL-BIB-0036)

Decision on Regulation of Chlorine and Hydrochloric Acid Under the Clean Air Act (CL-BIB-0037)

Decision on Regulation of Gasoline Vapors Under the Clean Air Act (CL-BIB-0041)

Decision on Regulation of Hydrogen Sulfide Under the Clean Air Act (CL-BIB-0042)

Decision on Regulation of Mineral Fibers Under the Clean Air Act (CL-BIB-0043)

Decision on Regulation of Phosgene Under the Clean Air Act (CL-BIB-0046)

Decision on Regulation of Propylene Oxide Under the Clean Air Act (CL-BIB-0048)

Decision on Regulation of Air Emissions from Isocyanate Production Facilities (CL-BIB-0050)

Decision on Regulation of Xylene Under the Clean Air Act (CL-BIB-0052)

Potential for Air Releases From CERCLA Sites (CL-BIB-0055)

Health Assessment Document for Acrolein, External Review (CL-BIB-0059)

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Health Assessment Document for Acetaldehyde, External Review (CL-BIB-0061)

Health Assessment Document for Hydrogen Sulfide, External Review (CL-BIB-0062)

Health Assessment Document for Phosgene, External Review (CL-BIB-0063)

Health Assessment Document for Polychlorinated Dibenzofurans (CL-BIB-0064)

Risk Analysis of Existing Data on Triethyl Phosphate (CL-BIB-0075)

Data Gathering and Risk Analysis of Existing Data on Dimethoxyethyl Phthalate and Other Phthalate Esters (CL-BIB-0076)

Information Gathering and Risk Analysis of Existing Data on Phenylethanol and Phenylethanol Acetate (CL-BIB-0077)

Risk Analysis of Existing Data on Phthalimide (CL-BIB-0079)

Report on Advances in Analytical Methods for Identification and Quantitation of Organic Compounds in Air (CL-BIB-0097)

Non-Occupational Pesticide Exposure Study (NOPES) (CL-BIB-0102)

Atmospheric Measurements on Trace Hazardous Organic Chemicals (CL-BIB-0103)

Hazardous Air Pollutants in the Urban Environment (CL-BIB-0104)

Determine Pulmonary Dose-Response Relationships (CL-BIB-0108)

Determine Neurotoxic Dose-Response Relationships (CL-BIB-0109)

Characterize Genotoxic Dose-Response Relationships (CL-BIB-0110)

Identify and Evaluate Toxic Components of Air Pollution (CL-BIB-0111)

Determine the Significance of Neurotoxic Response Indicators (CL-BIB-0112)

Develop Methods to Identify Reproductive Toxicity of Air Pollutants (CL-BIB-0114)

Integrated Air Cancer Project (CL-BIB-0115)

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Destruction of VOC/Hazardous Air Pollutant (HAP) Emissions via Catalytic Incineration (CL-BIB-0116)

Integrated Air Cancer Project: Wood Stove Operating Profiles (CL-BIB-0128)

Field Assessment of Steam VOC Removal Efficiencies (CL-BIB-0140)

Field Assessment of Waste Pretreatment at Refinery Land Treatment Facilities (CL-BIB-0141)

Field Assessment of Fate of Organics in Aerated Treatment Systems (CL-BIB-0142)

Rhode Island Toxics Integration Project--Evaluation of Air Emissions from Sewage Treatment Plants (CL-BIB-0145)

New York State Stack Sampling of Resource Recovery Plants (CL-BIB-0146)

Analysis of Acid Precipitation Samples Collected in West Virginia, Delaware, and Maryland (CL-BIB-0147)

Contra Costa Exposure Study (CL-BIB-0157)

Pesticide Impact Study from Field and Slash Burning (CL-BIB-0159)

Acrolein Emissions Update (CL-BIB-0254)

Acetaldehyde Preliminary Source Assessment (CL-BIB-0256)

Engineering Study: Standards Development for Hazardous Waste Treatment, Storage, and Disposal Facilities (CL-BIB-0257)

Hazardous Organic NESHAP (CL-BIB-0261)

Decision on Regulation of Hydrocyanic Acid Under the Clean Air Act (CL-BIB-0264)

Decision on Regulation of Propylene Under the Clean Air Act (CL-BIB-0265)

Decision on Regulation of Phosphorus Under the Clean Air Act (CL-BIB-0267)

Decision on Regulation of Ethyl Chloride Under the Clean Air Act (CL-BIB-0268)

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Decision on Regulation of Dimethylamine Under the Clean Air Act (CL-BIB-0269)

Decision on Regulation of Selenium and Its Compounds Under the Clean Air Act (CL-BIB-0270)

Decision on Regulation of Phthalic Anhydride Under the Clean Air Act (CL-BIB-0271)

Decision on Regulation of Sodium Hydroxide Under the Clean Air Act (CL-BIB-0272)

Decision on Regulation of Maleic Anhydride Under the Clean Air Act (CL-BIB-0276)

Decision on Regulation of Mercuric Chloride Under the Clean Air Act (CL-BIB-0277)

Decision on Regulation of Methanol Under the Clean Air Act (CL-BIB-0278)

Health Assessment for Chromium, Update (CL-BIB-0279)

Health Assessment Document for Chlorine and Hydrogen Chloride, External Review (CL-BIB-0280)

Development of Methods to Interpret Metabolism Data (CL-BIB-0281)

Health Assessment for Trichloroethylene Cancer Update (CL-BIB-0282)

Chemical Hazard Information Profile for Methyl Carbamate (CL-BIB-0283)

Chemical Hazard Information Profile for Benzotriazole-Based UV Light Stabilizers (CL-BIB-0284)

Chemical Hazard Information Profile for Piperidinyl-Based UV Light Stabilizers (CL-BIB-0285)

Toxics Air Monitoring Systems (TAMS) (CL-BIB-0286)

Analytical Methods Development for Toxic Substances (CL-BIB-0287)

Development of Ambient Methods for Hazardous Waste (CL-BIB-0288)

Methods Development for Sampling Hazardous Waste Emissions from Stacks (CL-BIB-0289)

Indoor Air Quality Research (CL-BIB-0290)

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Monitoring Human Exposure to Hazardous Air Pollutants (HAPs) (CL-BIB-0291)

Dioxin Analysis of Hospital Incinerator Ash (CL-BIB-0292)

Process Evaluation of Ambient Air Monitoring Near a Sugar Beet Processing Plant in Idaho (CL-BIB-0296)

Study to Define and Determine Mitigation Methods for Air Toxics in Puget Sound (CL-BIB-0297)

Ambient Air Monitoring in Portland, Oregon (Urban Soup) (CL-BIB-0298)

Ambient Air Monitoring for PCBs in El Dorado, Arkansas (CL-BIB-0299)

Development and Demonstration of Indoor Radon Reduction Measures for Homes (CL-BIB-0312)

Investigation of Radon Entry into Houses and Effectiveness of Mitigation Techniques - Evaluation Phase (CL-BIB-0317)

Chemical-Specific Manuals for Accidental Releases and Hazard Identification Systems (CL-BIB-0320)

Air Toxic Accidental Release Prevention Reference Manual - Mitigation Technology (CL-BIB-0321)

CFC Chemical Substitutes (CL-BIB-0324)

Determining Woodstove Catalyst Emission Control Performance Degradation (CL-BIB-0329)

Study of the Effects of Appliance Type and Operating Variables on Residential Wood Combustion Emissions (CL-BIB-0330)

Evaluation of HAP Controls under Transient Conditions (CL-BIB-0332)

North West Woodstove Study (CL-BIB-0334)

VOC and Hazardous Air Pollutant (HAP) Control of Department of Defense Facilities (CL-BIB-0335)

Vapor Phase Catalytic Oxidation of Mixed Volatile Organic Compounds (CL-BIB-0337)

Chlordane/Radon Mitigation Project (CL-BIB-0338)

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Environmental Tobacco Smoke Risk Evaluation (CL-BIB-0339)

Environmental Tobacco Smoke Manual (CL-BIB-0340)

Manual on Indoor Air Quality Problems in Commerical Buildings (CL-BIB-0341)

Asbestos NESHAP Demolition and Renovation Inspection Safety Procedures Workshop Manual (CL-BIB-0342)

National Emission Standards for Hazardous Air Pollutants: Supplement to 86/006 Compilation, Current as of January 1988 (CL-BIB-0343)

A Risk Assessment-based Air Enforcement Stragegy for Harris County, Texas (CL-BIB-0344)

Chemical Hazard Information Profile for Cyclohexylthiophthalimide (CL-BIB-0345)

Chemical Hazard Information Profile for 2,4-pentanedione (CL-BIB-0346)

Field Evaluation of a Heavy Gas Detection and Dispersion Approach Using a Whole Air Technique (CL-BIB-0347)

Refinement of a Detection and Analysis Approach to Volatile Organic Compound Release Characterization Using a Whole Air Technique (CL-BIB-0348)

Weight of Evidence (CL-BIB-0349)

Develop Dosimetry Models for VOC Hazard Identification (CL-BIB-0350)

Interim Air Toxics Data Base (CL-BIB-0351)

Ambient Air Toxics Monitoring - Methods Development and Sample Analysis (CL-BIB-0352)

Special Urban Monitoring Program (CL-BIB-0353)

Reportable Quantities Regulations (CL-BIB-0354)

Interpreted Role of Federally Permitted Releases (CL-BIB-0355)

Locating and Estimating Air Emissions from Sources of Perchloroethylene and Trichloroethylene (CL-BIB-0356)

Air Toxic Emission Factor Compilation (CL-BIB-0357)

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Locating and Estimating Air Emissions from Sources of 1,3-Butadiene (CL-BIB-0358)

Urban Air Toxics Program (CL-BIB-0359)

Field Testing and Method Evaluation for Industrial Cooling Towers (CL-BIB-0360)

Field Testing and Method Evaluation of Chrome Electroplating Plants (CL-BIB-0361)

Field Testing of Municipal Waste Combustors (CL-BIB-0362)

Integrated Risk Information System (IRIS) (CL-BIB-0363)

Radionuclides NESHAPS (CL-BIB-0364)

Controlling Air Toxics (CAT) Version 2.0 (CL-BIB-0365)

Investigation of Emissions from Burning of Agricultural Plastics (CL-BIB-0366)

Recommended Guidelines for Stack Testing at Municipal Waste Combustion Facilities (CL-BIB-0367)

Tier II, Stage 2 Modeling Improvements (CL-BIB-0368)

Ooms/DEGARID Modeling Improvements (CL-BIB-0369)

Investigation, Documentation and Testing of a Proposed Wet Deposition and Related Algorithms to ISC Models (CL-BIB-0370)

Assessment of Air Quality Impacts from Superfund Sites: Evaluation of Emissions During Site Cleanups (CL-BIB-0371)

Health Assessment Document for Mineral Fibers (CL-BIB-0372)

Health Assessment Document for Methyl Isocyanate (CL-BIB-0373)

Health Assessment Document for Toluene Diisocyanate (CL-BIB-0374)

Decision on Regulation of Epichlorohydrin Under the Clean Air Act (CL-BIB-0378)

Indoor Air Reference Data Base (CL-BIB-0379)

ORD IAQ Indoor Air Research Program (CL-BIB-0380)

Decision on Regulation of Contaminant Asbestos Under the Clean Air Act (CL-BIB-0381)

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Beryllium NESHAP Review (CL-BIB-0382)

Decision on Regulation of Dioxins/Furans Under the Clean Air Act (CL-BIB-0383)

Chromium Electroplating NESHAP Development (CL-BIB-0384)

Industrial Cooling Towers Chromium NESHAP Development (CL-BIB-0385)

Reproposal of Regulation for Boilers, Industrial Furnaces, and Incinerators That Use Hazardous Waste as Fuel (CL-BIB-0386)

Tiered Control for Accidental Releases (CL-BIB-0387)

Prevention Reference Manual: Overviews on Preventing and Controlling Accidental Releases of Selected Toxic Chemicals (CL-BIB-0388)

Multimedia, Multipollutant Field Study to Establish Levels of Toxics Contained in Air, Soil, Sediments, Water and Agricultural Products from a Model Municipal Waste Combustor (CL-BIB-0389)

Studies on Toxicity Applicable to Risk Assessment (STARA) (CL-BIB-0390)

Source Category Parameters (CL-BIB-0391)

The Toxic Interaction Database (CL-BIB-0392)

SARA Title IV Report to Congress (CL-BIB-0393)

Introductory Indoor Air Quality (IAQ) Course for State and Local Public Health Officials (CL-BIB-0394)

Directory of State Contacts on Indoor Air Quality (IAQ) (CL-BIB-0397)

Workbook of Models for Screening Air Toxics (CL-BIB-0398)

Archive and Evaluate Selected Air Toxics Dispersion Models (CL-BIB-0399)

Toxic Chemical Testing for Assessment/Quality Assurance for Toxic Substances (CL-BIB-0400)

Toxic Chemical Testing for Assessment Exposure Monitoring Systems Development (CL-BIB-0401)

Identification and Quantitation of Organic Compounds in Air (CL-BIB-0402)

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Performance Audit Results for POHC Testing During RCRA Trial Burns (CL-BIB-0403)

Validation of the Flux Chamber Method for Impoundment Pond Emissions (CL-BIB-0404)

Development of New Methods for SW846 (CL-BIB-0405)

Determination of Population Exposure to Mobile Source Pollutants (CL-BIB-0406)

Residential Wood Combustion and Automotive Emissions on the Boise, Idaho Air Shed (CL-BIB-0407)

Integrated Air Cancer Project (IACP) (CL-BIB-0408)

Population Exposure Studies (CL-BIB-0416)

Data Analysis of the Population Exposure Study (CL-BIB-0417)

TEAM Study: Indoor Air; 1982 Indoor Air Study of 2 Office Buildings (CL-BIB-0418)

TEAM Study: Indoor Air; Particle Study (CL-BIB-0419)

Indoor Air Studies of the Mutagenic Emissions from Unvented Combustion Sources (CL-BIB-0420)

Neurobehavioral and Sensory Irritant Effects of Complex VOC Mixtures in Humans (CL-BIB-0421)

Mutagenicity of Individual Indoor Air Mixtures (CL-BIB-0422)

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State Surveys (CL-BIB-0424)

House Evaluation Program (CL-BIB-0425)

Land Evaluation and Soil Gas Studies (CL-BIB-0426)

Radon Demonstration Program (CL-BIB-0427)

Study of Radon in Drinking Water (CL-BIB-0428)

Epidemiological Study of Radon Effects (CL-BIB-0429)

Study of Chlorpyrifos Used as a Termiticide (CL-BIB-0430)

Non-Occupational Pesticide Exposure Survey (CL-BIB-0431)

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Study of Exposure to Anti-Microbials (CL-BIB-0432)

Inert Ingredients in Pesticides (CL-BIB-0433)

A Study of Formaldehyde from Pressed Wood Products (CL-BIB-0434)

Revisions to the NESHAP Regulation (Section 112 of the Clean Air Act) for Asbestos (CL-BIB-0435)

Paradichlorobenzene (Used in Moth Repellents and Air Fresheners) (CL-BIB-0436)

Integrated Solvents Workgroup (CL-BIB-0437)

Computerized Consumer Exposure Model (CCEM) Development (CL-BIB-0438)

Study of Alternative Designs for Assessing Exposure in Homes (CL-BIB-0439)

Evaluation of Contaminant Migration in Indoor Air in Homes (CL-BIB-0440)

Investigation of Radon Entry into Dwellings and the Effects of Selected Radon Mitigation Techniques (CL-BIB-0441)

Investigation of Radon Entry into Houses and Effectiveness of Mitigation Techniques - Evaluation Phase (CL-BIB-0442)

Woodburning Survey (Colorado) (CL-BIB-0443)

Measurement of Selected Air Toxics (Montana) (CL-BIB-0444)

Chemical Analysis of Particulate Filters (Colorado) (CL-BIB-0445)

Study of Enhanced Enforcement to Control Air Toxics (CL-BIB-0446)

Phase I Development Demonstration of Mitigation for Florida Houses (CL-BIB-0447)

General Quantitative Risk Assessment Guidelines for Non-Carcinogenic Health Effects Data (CL-BIB-0448)

Chamber Studies Characterizing the Organic Emissions from Kerosene Space Heaters: Phase II (CL-BIB-0449)

Volatile Organic Hydrocarbon and Aldehyde Distribution for the IACP, Boise, Idaho Residential Study (CL-BIB-0450)

Sources of Fine Particle Organic Matter in Boise (CL-BIB-0451)

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Northeast Cooperative Woodstove Study - Phase II (CL-BIB-0452)

Semivolatile and Condensible Organic Compound Distribution in Ambient Air and Woodstove Emissions (CL-BIB-0453)

Particulate Matter-Organic Compounds Interactions on Municipal Incinerator Flyash (CL-BIB-0454)

Field Test Evaluation of a Methodology for Measuring Emissions of Selected Toxic Metals from Stationary Sources (CL-BIB-0455)

Laboratory Evaluation of a Test Method for Measuring Emissions of Selected Toxic Metals from the Incineration of Hazardous Materials (CL-BIB-0456)

The Influence of Woodburning on the Mutagenicity of Air Outdoor and Indoors (CL-BIB-0457)

Quality Assurance Considerations in the Design of Air Toxics Monitoring Programs at Superfund Sites (CL-BIB-0458)

The Characterization of Aerosols in Residential Environments (CL-BIB-0459)

Measurement and Evaluation of Personal Exposure to Aerosols (CL-BIB-0460)

Recommended Methodology for the Measurement of Particulate Emission Including Condensables from Stationary Sources (CL-BIB-0462)

Classification of Mass Spectra of Toxic Compounds with an Inductive Expert System (CL-BIB-0463)

Final Design and Evaluation of a Large Volume Size Fraction Sampler (CL-BIB-0464)

Transformation of Boise Sources: The Production and Distribution of Mutagenic Compounds in Wood Smoke and Auto Exhaust (CL-BIB-0465)

Mutagenicity of Organics Associated with PM-2.5 and PM-10 Hi-Vol Particulates from a Wood Smoke Impacted Residential Area (CL-BIB-0466)

GC/MS Analysis of Stove Emissions and Ambient Samples from a Wood-smoke Impacted Area (CL-BIB-0467)

IAQ Risk Study Assessment (CL-BIB-0468)

Indoor Dispersion/Ventilation Model (CL-BIB-0469)

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Low Cost Personal Monitoring Devices for Indoor Air (CL-BIB-0471)

Compendium of Indoor Air Quality Measurement Methods (CL-BIB-0472)

Analysis of Semivolatile Compounds in Passive Air Samples by On-Line Supercritical Fluid Extraction/Gas Chromatography (CL-BIB-0473)

Identification of the Composition of Source-Related Groups of Volatile Organics in Ambient and Indoor Air (CL-BIB-0474)

Trace Metal Aerosol (CL-BIB-0475)

Indoor Air Pollution Mitigation Technology Research (CL-BIB-0476)

Dilution Sampling System (CL-BIB-0477)

Fundamental Radon Mitigation Studies (CL-BIB-0478)

Sampling and Analysis Experiments for Products of Incomplete Combustion (PICs) (CL-BIB-0479)

Preliminary Evaluation of Test Methods for Volatile Organics in Hazardous Waste (CL-BIB-0480)

Quality Assurance for Measurement of Variables When Using Proposed Method 5G for Wood Heater Certification Testing (CL-BIB-0481)

Interpretation of Field Performance Audit Data in Woodstove Emission Measurement Programs (CL-BIB-0482)

Evaluation of Sampling Methods for Measuring Ethylene Oxide Emissions from Sterilization Chambers and Control Units and Determining Control Unit Efficiency (CL-BIB-0483)

Air Emissions from Hazardous Waste Stabilization (CL-BIB-0484)

Products of Incomplete Combustion (PICs) in Rotary Kiln Simulator (CL-BIB-0485)

Studies on the VOC Analytical Method by the Use of a TOC Analyzer (CL-BIB-0487)

A Study of Products from the Photooxidation of Toluene Using MS/MS Analysis (CL-BIB-0488)

Background and Status of the Computerized Accidental Release Planning System (CL-BIB-0489)

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Monitoring Ambient Air for Dioxins (CL-BIB-0490)

Parametric Testing for Municipal Waste Combustion at Marion County, Oregon (CL-BIB-0491)

Automated Analysis of Multicomponent Compressed Gas Mixtures Containing Parts Per Billion Concentration of Toxic Organic Compounds (CL-BIB-0492)

Design, Develop and Deliver Three Prototype Systems for Radon Measurement (CL-BIB-0493)

Statistical Properties of Hourly Concentrations of Volatile Organic Compounds at Baton Rouge, Louisiana (CL-BIB-0494)

Analysis of Toxic Organic Vapors in Air Using a Portable Photoionization Gas Chromatograph (CL-BIB-0495)

Method for Determination of Polychlorinated Dibenzo-p-dioxins and Dibenzofurans in Stack Gas Emissions and Ambient Air (CL-BIB-0496)

Baltimore Total Exposure Assessment Methodology (TEAM) VOC Study (CL-BIB-0497)

New Studies of Population Exposure to VOCs and Major Sources of Exposure (CL-BIB-0498)

Effectiveness of Various Surface Coatings in Reducing Low Pressure-Driven Influx of Radon Through Concrete Block Basement Walls (CL-BIB-0499)

Characterization of Emissions from a Hexachlorocyclopentadiene Manufacturer in Memphis, TN (CL-BIB-0500)

Follow-on Radon Measurements in 40 Eastern Pennsylvania Houses Using Radon Reduction Techniques (CL-BIB-0501)

Evaluation of Refrigerant from Mobile Air Conditioners (CL-BIB-0502)

Survey of CFC Destruction Techniques (CL-BIB-0503)

Investigation of the Blaze Icing KEJ1101 (Catalytic Woodstove) Operating Characteristics (CL-BIB-0504)

Emission Testing of a Mass Burn Combustor using and ESP/Spray Dryer Control System (CL-BIB-0505)

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Indoor Air Source Data Base (CL-BIB-0507)

Odors in Indoor Environments (CL-BIB-0508)

Design Change of NO2 Electrochemical Personal Exposure Monitor (PEM) (CL-BIB-0509)

Determine Effect of Temperature Variation on NO2 Passive Sampling Device (PSD) (CL-BIB-0510)

Biomarkers for Assessing Body Burden from Exposure to Toxic Environmental Pollutants (CL-BIB-0511)

Develop Analytical Method for VOCs in Whole Blood (CL-BIB-0512)

Chemical Ionization Mass Spectrometry for Trace-Level Determination of Ambient Polar Volatile Organic Compounds (CL-BIB-0513)

Chamber Exposure Studies (Blood-Breath) (CL-BIB-0514)

Field Evaluation of Sampling and Analysis for Organic Pollutants in Indoor Air (CL-BIB-0515)

Chemical Fractionation and Analysis of China Coal Combustion Emission Samples (CL-BIB-0516)

A High-Efficiency, High-Volume Compound Annular Denuder Sampler for Phase-Distributed Semi-Volatile Organic Chemicals (CL-BIB-0517)

Personal Sampling Device (PSD) Modification and Analysis (CL-BIB-0518)

Development of a Mass Spectral Identification Scheme for Electron Impact Spectra of Volatile Compounds (CL-BIB-0519)

VOCs Samplers for Superfund Site Applications (CL-BIB-0520)

Statistical Comparison of Results of Two Indoor Air Pilot Studies (CL-BIB-0521)

Design and Preliminary Evaluation of a Low Flow Rate Indoor Air Sampler (CL-BIB-0522)

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Real-Time Formaldehyde Monitor (CL-BIB-0525)

Development of a Polar VOC Detector Based on Photo-Induced Nucleation (CL-BIB-0526)

Installations and Measurements on Radon Demonstration Project Houses in Clinton, NJ (CL-BIB-0527)

The Design and Installation of a Passive Radon Mitigation System (CL-BIB-0528)

Study to Field Test and Demonstrate Radon Prevention Techniques on New Homes (CL-BIB-0529)

Preparation of a Radon/New Construction Report (CL-BIB-0530)

Monitoring the Effectiveness of Existing Radon Mitigation Techniques in Project Houses in Clinton, NJ (CL-BIB-0531)

Collection of Information on the Application of Radon-Resistant Construction Techniques in New Residential Housing Stock (CL-BIB-0532)

Evaluation of Canister-Based Sampling in the TAMS Network (CL-BIB-0533)

1987-1988 NMOC/NOX SUMMER STUDY (AMBIENT MONITORING) (FL02 KPDT0001)

URBAN AIR TOXICS PROGRAM (MO01 MONITORING 1)

STRATEGIES FOR CONTROLLING THE OXIDANT PROBLEM IN MAJOR URBAN AREAS (NY01 PROJECT 001)

FIELD AND SLASH BURNING PESTICIDE IMPACT STUDY (OR01 PROJECT 001)

RUTLAND RESOURCE RECOVERY FACILITY SITE-SPECIFIC ENVIRONMENTAL ASSESSMENT (VT01 RUTLAND RRF01)

JORGENSEN STEEL BAGHOUSE CHROMIUM EMISSIONS (WA02 PSAPCA 10)

RECEPTOR MODELING FEASIBILITY STUDY (WA02 PSAPCA 7)

URBAN AIR TOXICS MITIGATION STUDY - PHASE I (WA02 PSAPCA 8)

WYNDVALLEY - DEVELOPMENT OF A NONGUIDELINE AIR STAGNATION DIFFUSION MODEL (WA02 PSAPCA 9)

ENVIRONMENTAL TOBACCO SMOKE (CL-ETS)
Environmental Tobacco Smoke Risk Evaluation (CL-BIB-0339)

Environmental Tobacco Smoke Manual (CL-BIB-0340)

Investigation of Environmental Tobacco Smoke for Particulate Phase Marker Compounds Using Multidimensional Gas Chromatography (CL-BIB-0506)

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EPICHLOROHYDRIN (106-89-8)
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EPIDEMIOLOGY STUDY (ES)
Methodologies for Worksite Neurotoxicity (CL-BIB-0169)

Byssinosis Prevention (CL-BIB-0192)

Occupational Lung Disease Associated with Exposure to Diesel Emissions (CL-BIB-0193)

National Occupational Health Survey of Mining (CL-BIB-0198)

Prospective Epidemiologic Industrial Hygiene Study of Mild Steel Welders (CL-BIB-0202)

Study of Workers in the Dusty Trades in North Carolina - NCI (CL-BIB-0207)

Morbidity/Mortality Study of Sand Industry (CL-BIB-0208)

An Epidemiological Environmental Study of Workers in Office Buildings (CL-BIB-0211)

Mortality of Diesel Exposed Miners (CL-BIB-0213)

Comparative Research in Analytical Pathology (CL-BIB-0216)

Mortality Study of Chemical Plants in Kanawha Valley, West Virginia (CL-BIB-0221)

Mortality and Industrial Hygiene Study of Formaldehyde (CL-BIB-0223)

Ethylene Oxide Mortality Study - NCI (CL-BIB-0224)

Investigation of Workers Exposed to MBOCA (CL-BIB-0225)

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Update of Completed Cohort Mortality Studies - NCI (CL-BIB-0227)

Mortality and Industrial Hygiene Characteristics of Workers Exposed to Lead Chromate Paints - NCI (CL-BIB-0228)

Beryllium Retrospective Cohort Investigation - NCI (CL-BIB-0229)

Medical, Biometric and Industrial Hygiene Study of Emerging Problems (CL-BIB-0230)

Health Hazard Evaluations and Technical Assistance (CL-BIB-0231)

Epidemiologic and Industrial Hygiene Support of Toxic Substance Control Act - EPA (CL-BIB-0232)

Cohort Mortality Study of Antimony Smelter Workers (CL-BIB-0233)

Morbidity and Reproductive Study of U.S. Chemical Workers (CL-BIB-0236)

Industrywide Study of Workers Exposed to 4,4'-Methylenedianiline (MDA) (CL-BIB-0239)

Retrospective Cohort Investigation of Non-Asbestos Welders (CL-BIB-0240)

Laryngeal Cancer in Workers Exposed to Sulfuric Acid (CL-BIB-0241)

Case-Control Study of Lung Cancer in Teamsters Union (CL-BIB-0242)

Cohort Mortality Study of Toluene Diisocyanate Exposed Workers (CL-BIB-0243)

Uranium Miners-Low Dose Investigation (CL-BIB-0244)

Case-Control Mortality Study of Nitroglycerin-Exposed Workers (CL-BIB-0247)

Access to National Occupational Hazard Survey Data Base Profile Development (CL-BIB-0252)

Surveillance Cooperative Agreements Between NIOSH and States (SCAN) (CL-BIB-0253)

Support of EPA's Environmental Epidemiologic Program (CL-BIB-0377)

Support of EPA's Environmental Epidemiologic Program (CL-BIB-0409)

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Mortality Study of Workers Exposed to Halowax (CL-BIB-0410)

Case Control Study of Renal Disease and Occupational Exposure (CL-BIB-0412)

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Analysis of Health Interview Survey Data (CL-BIB-0415)

Epidemiological Study of Radon Effects (CL-BIB-0429)

ETHOXYETHANOL,2- (110-80-5)
Glycol Ethers - NTP Management (CL-BIB-0376)

ETHYL BENZENE (100-41-4)
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ETHYLENE DICHLORIDE (107-06-2)
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Sampling and Analysis Experiments for Products of Incomplete Combustion (PICs) (CL-BIB-0479)

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ETHYLENE OXIDE (75-21-8)
Temporal Factors Influencing Carcinogenicity of Industrial Chemicals (CL-BIB-0190)

Mortality Study of Chemical Plants in Kanawha Valley, West Virginia (CL-BIB-0221)

Ethylene Oxide Mortality Study - NCI (CL-BIB-0224)

Epidemiologic and Industrial Hygiene Support of Toxic Substance Control Act - EPA (CL-BIB-0232)

Hazardous Organic NESHAP (CL-BIB-0261)

Support of EPA's Environmental Epidemiologic Program (CL-BIB-0377)

Support of EPA's Environmental Epidemiologic Program (CL-BIB-0409)

Evaluation of Sampling Methods for Measuring Ethylene Oxide Emissions from Sterilization Chambers and Control Units and Determining Control Unit Efficiency (CL-BIB-0483)

ETHYLHEXYLPHTHALATE,BIS,2- (117-81-7)
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EXPLOSIVES (2892)
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EMISSIONS INVENTORY OF A PIPELINE MARINE TERMINAL (AK01 PROJECT 001)

IN-VEHICLE AIR TOXICS CHARACTERIZATION STUDY IN THE SOUTH COAST AIR BASIN (CA03-002)

REGIONAL AIR TOXICS AND RISK ASSESSMENT MODEL ENVIRONMENT (CA03-003)

MULTI-PATHWAY HEALTH RISK ASSESSMENT INPUT PARAMETERS GUIDANCE DOCUMENT (CA03-005)

Estimating Exposure to Arsenic, Beryllium, Cadmium, Chromium, and Nickel From Coal and Oil Combustion (CL-BIB-0029)

Exposure/Risk Assessment on Air Emissions From Treatment, Storage and Disposal Facilities (CL-BIB-0030)

Non-Occupational Pesticide Exposure Study (NOPES) (CL-BIB-0102)

Integrated Air Cancer Project (CL-BIB-0115)

Contra Costa Exposure Study (CL-BIB-0157)

Industrial Hygiene Characterization of 1,3-Butadiene Exposed Workers (CL-BIB-0234)

Development of Methods to Interpret Metabolism Data (CL-BIB-0281)

Indoor Air Quality Research (CL-BIB-0290)

Monitoring Human Exposure to Hazardous Air Pollutants (HAPs) (CL-BIB-0291)

Process Evaluation of Ambient Air Monitoring Near a Sugar Beet Processing Plant in Idaho (CL-BIB-0296)

Study to Define and Determine Mitigation Methods for Air Toxics in Puget Sound (CL-BIB-0297)

Ambient Air Monitoring in Portland, Oregon (Urban Soup) (CL-BIB-0298)

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Chemical Hazard Information Profile for Cyclohexylthiophthalimide (CL-BIB-0345)

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Process Evaluation of Ambient Air Monitoring Near a Sugar Beet Processing Plant in Idaho (CL-BIB-0296)

SULFURIC ACID (7664-93-9)
Laryngeal Cancer in Workers Exposed to Sulfuric Acid (CL-BIB-0241)

ASSESSMENT OF EMISSIONS FROM ADJACENT INDUSTRIES IMPACTING THE BROOKHURST SUBDIVISION, NATRONA COUNTY, WYOMING (WY01 PROJECT 002)

TETRACHLORODIBENZODIOXIN,2,3,7,8-,P- (1746-01-6)
Morbidity and Reproductive Study of U.S. Chemical Workers (CL-BIB-0236)

SOURCES, OCCURRENCE AND EFFECTS OF DIOXINS AND DIBENZOFURANS IN OHIO'S ENVIRONMENT (OH01 DIOXIN D001)

RUTLAND RESOURCE RECOVERY FACILITY SITE-SPECIFIC ENVIRONMENTAL ASSESSMENT (VT01 RUTLAND RRF01)

TETRACHLORODIBENZOFURAN,2,3,7,8- (51207-31-9)
New York State Stack Sampling of Resource Recovery Plants (CL-BIB-0146)

SOURCES, OCCURRENCE AND EFFECTS OF DIOXINS AND DIBENZOFURANS IN OHIO'S ENVIRONMENT (OH01 DIOXIN D001)

RUTLAND RESOURCE RECOVERY FACILITY SITE-SPECIFIC ENVIRONMENTAL ASSESSMENT (VT01 RUTLAND RRF01)

TETRACHLOROETHANE,1,1,2,2- (79-34-5)
URBAN AIR TOXICS PROGRAM (M001 MONITORING 1)

TETRACHLOROETHYLENE (127-18-4)
Update of Completed Cohort Mortality Studies - NCI (CL-BIB-0227)

Hazardous Organic NESHAP (CL-BIB-0261)

Locating and Estimating Air Emissions from Sources of Perchloroethylene and Trichloroethylene (CL-BIB-0356)

Integrated Solvents Workgroup (CL-BIB-0437)

Measurement of Selected Air Toxics (Montana) (CL-BIB-0444)

Analysis of Toxic Organic Vapors in Air Using a Portable Photoionization Gas Chromatograph (CL-BIB-0495)

New Studies of Population Exposure to VOCs and Major Sources of Exposure (CL-BIB-0498)

TETRACHLOROETHYLENE (127-18-4) (cont.)
URBAN AIR TOXICS PROGRAM (M001 MONITORING 1)

TEXTILE MILL PRODUCTS (22)
Byssinosis Prevention (CL-BIB-0192)

Comparative Research in Analytical Pathology (CL-BIB-0216)

THALLIUM, SOLUBLE COMPOUNDS, AS TL (7440-28-0)
Field Test Evaluation of a Methodology for Measuring Emissions of Selected Toxic Metals from Stationary Sources (CL-BIB-0455)

TIRES AND INNER TUBES (301)
Chemical Hazard Information Profile for Cyclohexylthiophthalimide (CL-BIB-0345)

TOLUALDEHYDE,O- (529-20-4)
Development of a Polar VOC Detector Based on Photo0 Induced Nucleation (CL-BIB-0526)

TOLUENE (108-88-3)
A Risk Assessment-based Air Enforcement Stragegy for Harris County, Texas (CL-BIB-0344)

Field Evaluation of a Heavy Gas Detection and Dispersion Approach Using a Whole Air Technique (CL-BIB-0347)

Refinement of a Detection and Analysis Approach to Volatile Organic Compound Release Characterization Using a Whole Air Technique (CL-BIB-0348)

Measurement of Selected Air Toxics (Montana) (CL-BIB-0444)

Preliminary Evaluation of Test Methods for Volatile Organics in Hazardous Waste (CL-BIB-0480)

A Study of Products from the Photooxidation of Toluene Using MS/MS Analysis (CL-BIB-0488)

Analysis of Toxic Organic Vapors in Air Using a Portable Photoionization Gas Chromatograph (CL-BIB-0495)

URBAN AIR TOXICS PROGRAM (M001 MONITORING 1)

ASSESSMENT OF EMISSIONS FROM ADJACENT INDUSTRIES IMPACTING THE BROOKHURST SUBDIVISION, NATRONA COUNTY, WYOMING (WY01 PROJECT 002)

TOLUENE DIISOCYANATE (26471-62-5)
Cohort Mortality Study of Toluene Diisocyanate Exposed Workers (CL-BIB-0243)

TOLUENE,24,DIISOCYANATE (584-84-9)
Decision on Regulation of Air Emissions from Isocyanate Production Facilities (CL-BIB-0050)

Health Assessment Document for Toluene Diisocyanate (CL-BIB-0374)

TOTAL CARBON (CL-CARBON)
Study to Define and Determine Mitigation Methods for Air Toxics in Puget Sound (CL-BIB-0297)

TOXICITY TESTING (TT)
Determine Pulmonary Dose-Response Relationships (CL-BIB-0108)

Determine Neurotoxic Dose-Response Relationships (CL-BIB-0109)

Characterize Genotoxic Dose-Response Relationships (CL-BIB-0110)

Identify and Evaluate Toxic Components of Air Pollution (CL-BIB-0111)

Determine the Significance of Neurotoxic Response Indicators (CL-BIB-0112)

Develop Methods to Identify Reproductive Toxicity of Air Pollutants (CL-BIB-0114)

Particulate and Tissue Analysis Service and Research (CL-BIB-0161)

Evaluation of Mesothelioma Production by Asbestos Substitutes (CL-BIB-0162)

Behavioral Teratology of Alcohol Solvents (CL-BIB-0165)

Neurotoxicity of Aliphatic Carbon Solvents (CL-BIB-0166)

Neurobehavioral Effects from Single/Mixed Spray Paint Agents (CL-BIB-0167)

Neurotoxicity from Exposures to Heavy Metals (CL-BIB-0168)

Methodologies for Worksite Neurotoxicity (CL-BIB-0169)

Assessment of Cocarcinogenic Activity of Asphalt Fumes (CL-BIB-0174)

Inhalation Reproductive and Developmental Toxicity Testing (CL-BIB-0175)

Metabolism and Excretion Studies of Bis(2-Methoxyethyl) Ether (Diglyme) (CL-BIB-0178)

TOXICITY TESTING (TT) (cont.)
V205- NTP Chemical Manager (CL-BIB-0181)

In Vitro Tests for Workplace Carcinogens (CL-BIB-0182)

Dimethylformamide- NTP Chemical Manager (CL-BIB-0186)

Semen Analysis in Animals, Longitudinal and Field Studies (CL-BIB-0188)

Evaluation of Drosophila for Teratogen Screening (CL-BIB-0189)

Temporal Factors Influencing Carcinogenicity of Industrial Chemicals (CL-BIB-0190)

Byssinosis Prevention (CL-BIB-0192)

Comparative Research in Analytical Pathology (CL-BIB-0216)

Polycyclic Aromatic Hydrocarbons, Particulates and Lung Defense Mechanisms (CL-BIB-0217)

Alveolar Type II Cells: Effect of Silica (CL-BIB-0218)

Development of Methods to Interpret Metabolism Data (CL-BIB-0281)

Cellular and Molecular Cardiac Toxicology (CL-BIB-0303)

Arylamine Adducts in Blood as Indicators of Exposure (CL-BIB-0304)

Pulmonary Response to Inhaled Fibrogenic Minerals (CL-BIB-0308)

Chemical Hazard Information Profile for Cyclohexylthiophthalimide (CL-BIB-0345)

Chemical Hazard Information Profile for 2,4-pentanedione (CL-BIB-0346)

Develop Dosimetry Models for VOC Hazard Identification (CL-BIB-0350)

Glycol Ethers - NTP Management (CL-BIB-0376)

Indoor Air Studies of the Mutagenic Emissions from Unvented Combustion Sources (CL-BIB-0420)

Field Evaluation of Sampling and Analysis for Organic Pollutants in Indoor Air (CL-BIB-0515)

TOXICITY TESTING (TT) (cont.)
Chemical Fractionation and Analysis of China Coal Combustion Emission Samples (CL-BIB-0516)

TRICHLORODIBENZODIOXIN,2,3,7-,P- (33857-28-2)
New York State Stack Sampling of Resource Recovery Plants (CL-BIB-0146)

TRICHLOROETHANE,1,1,1- (71-55-6)
Field Evaluation of a Heavy Gas Detection and Dispersion Approach Using a Whole Air Technique (CL-BIB-0347)

Refinement of a Detection and Analysis Approach to Volatile Organic Compound Release Characterization Using a Whole Air Technique (CL-BIB-0348)

Sampling and Analysis Experiments for Products of Incomplete Combustion (PICs) (CL-BIB-0479)

URBAN AIR TOXICS PROGRAM (M001 MONITORING 1)

TRICHLOROETHANE,1,1,2- (79-00-5)
URBAN AIR TOXICS PROGRAM (M001 MONITORING 1)

TRICHLOROETHYLENE (79-01-6)
Hazardous Organic NESHAP (CL-BIB-0261)

Health Assessment for Trichloroethylene Cancer Update (CL-BIB-0282)

Locating and Estimating Air Emissions from Sources of Perchloroethylene and Trichloroethylene (CL-BIB-0356)

Integrated Solvents Workgroup (CL-BIB-0437)

Sampling and Analysis Experiments for Products of Incomplete Combustion (PICs) (CL-BIB-0479)

Analysis of Toxic Organic Vapors in Air Using a Portable Photoionization Gas Chromatograph (CL-BIB-0495)

URBAN AIR TOXICS PROGRAM (M001 MONITORING 1)

TRICHLOROPHENOL,2,4,5- (95-95-4)
Mortality of Dioxin Workers (CL-BIB-0226)

TRIETHYL PHOSPHATE (78-40-0)
Risk Analysis of Existing Data on Triethyl Phosphate (CL-BIB-0075)

URANIUM-RADIUM-VANADIUM ORES (1094)
Uranium Miners-Low Dose Investigation (CL-BIB-0244)

VANADIUM (7440-62-2)
URBAN AIR TOXICS PROGRAM (M001 MONITORING 1)

VANADIUM PENTOXIDE (1314-62-1)
V205- NTP Chemical Manager (CL-BIB-0181)

VARIOUS (CL-VARIOUS)
Hazardous Air Pollutants in the Urban Environment (CL-BIB-0104)

Determine Pulmonary Dose-Response Relationships (CL-BIB-0108)

Determine Neurotoxic Dose-Response Relationships (CL-BIB-0109)

Characterize Genotoxic Dose-Response Relationships (CL-BIB-0110)

Identify and Evaluate Toxic Components of Air Pollution (CL-BIB-0111)

Determine the Significance of Neurotoxic Response Indicators (CL-BIB-0112)

Develop Methods to Identify Reproductive Toxicity of Air Pollutants (CL-BIB-0114)

Destruction of VOC/Hazardous Air Pollutant (HAP) Emissions via Catalytic Incineration (CL-BIB-0116)

Analysis of Acid Precipitation Samples Collected in West Virginia, Delaware, and Maryland (CL-BIB-0147)

Particulate and Tissue Analysis Service and Research (CL-BIB-0161)

Evaluation of Mesothelioma Production by Asbestos Substitutes (CL-BIB-0162)

Biomonitoring of Exposure to Coal Tar (CL-BIB-0163)

Neurobehavioral Effects from Single/Mixed Spray Paint Agents (CL-BIB-0167)

Methodologies for Worksite Neurotoxicity (CL-BIB-0169)

Inhalation Reproductive and Developmental Toxicity Testing (CL-BIB-0175)

Semen Analysis in Animals, Longitudinal and Field Studies (CL-BIB-0188)

Evaluation of Drosophila for Teratogen Screening (CL-BIB-0189)

National Occupational Health Survey of Mining (CL-BIB-0198)

VARIOUS (CL-VARIOUS) (cont.)

Medical, Biometric and Industrial Hygiene Study of Emerging Problems (CL-BIB-0230)

Health Hazard Evaluations and Technical Assistance (CL-BIB-0231)

Uranium Miners-Low Dose Investigation (CL-BIB-0244)

Access to National Occupational Hazard Survey Data Base Profile Development (CL-BIB-0252)

Surveillance Cooperative Agreements Between NIOSh and States (SCAN) (CL-BIB-0253)

Chemical Hazard Information Profile for Benzotriazole-Based UV Light Stabilizers (CL-BIB-0284)

Chemical Hazard Information Profile for Piperidinyl-Based UV Light Stabilizers (CL-BIB-0285)

Monitoring Human Exposure to Hazardous Air Pollutants (HAPs) (CL-BIB-0291)

Cellular and Molecular Cardiac Toxicology (CL-BIB-0303)

Chemical-Specific Manuals for Accidental Releases and Hazard Identification Systems (CL-BIB-0320)

Air Toxic Accidental Release Prevention Reference Manual - Mitigation Technology (CL-BIB-0321)

Ambient Air Toxics Monitoring - Methods Development and Sample Analysis (CL-BIB-0352)

Special Urban Monitoring Program (CL-BIB-0353)

Reportable Quantities Regulations (CL-BIB-0354)

Interpreted Role of Federally Permitted Releases (CL-BIB-0355)

Air Toxic Emission Factor Compilation (CL-BIB-0357)

Urban Air Toxics Program (CL-BIB-0359)

Field Testing of Municipal Waste Combustors (CL-BIB-0362)

Integrated Risk Information System (IRIS) (CL-BIB-0363)

Controlling Air Toxics (CAT) Version 2.0 (CL-BIB-0365)

Tier II, Stage 2 Modeling Improvements (CL-BIB-0368)

VARIOUS (CL-VARIOUS) (cont.)

Ooms/DEGARID Modeling Improvements (CL-BIB-0369)

Investigation, Documentation and Testing of a Proposed Wet Deposition and Related Algorithms to ISC Models (CL-BIB-0370)

Measurement of Exposures During Firefighting (CL-BIB-0375)

Reproposal of Regulation for Boilers, Industrial Furnaces, and Incinerators That Use Hazardous Waste as Fuel (CL-BIB-0386)

Tiered Control for Accidental Releases (CL-BIB-0387)

Studies on Toxicity Applicable to Risk Assessment (STARA) (CL-BIB-0390)

Source Category Parameters (CL-BIB-0391)

The Toxic Interaction Database (CL-BIB-0392)

SARA Title IV Report to Congress (CL-BIB-0393)

Workbook of Models for Screening Air Toxics (CL-BIB-0398)

Archive and Evaluate Selected Air Toxics Dispersion Models (CL-BIB-0399)

Toxic Chemical Testing for Assessment/Quality Assurance for Toxic Substances (CL-BIB-0400)

Toxic Chemical Testing for Assessment Exposure Monitoring Systems Development (CL-BIB-0401)

Validation of the Flux Chamber Method for Impoundment Pond Emissions (CL-BIB-0404)

Case-Control Survey to Test Hypotheses Generated by Computer Maps (CL-BIB-0414)

Analysis of Health Interview Survey Data (CL-BIB-0415)

TEAM Study: Indoor Air; Particle Study (CL-BIB-0419)

Mutagenicity of Individual Indoor Air Mixtures (CL-BIB-0422)

Integrated Environmental Management Project (CL-BIB-0423)

Study of Exposure to Anti-Microbials (CL-BIB-0432)

Inert Ingredients in Pesticides (CL-BIB-0433)

VARIOUS (CL-VARIOUS) (cont.)
Study of Enhanced Enforcement to Control Air Toxics (CL-BIB-0446)

General Quantitative Risk Assessment Guidelines for Non-Carcinogenic Health Effects Data (CL-BIB-0448)

Northeast Cooperative Woodstove Study - Phase II (CL-BIB-0452)

IAQ Risk Study Assessment (CL-BIB-0468)

Indoor Dispersion/Ventilation Model (CL-BIB-0469)

Dilution Sampling System (CL-BIB-0477)

Products of Incomplete Combustion (PICs) in Rotary Kiln Simulator (CL-BIB-0485)

Background and Status of the Computerized Accidental Release Planning System (CL-BIB-0489)

VINYL CHLORIDE (75-01-4)
Update of Completed Cohort Mortality Studies - NCI (CL-BIB-0227)

National Emission Standards for Hazardous Air Pollutants: Supplement to 86/006 Compilation, Current as of January 1988 (CL-BIB-0343)

Sampling and Analysis Experiments for Products of Incomplete Combustion (PICs) (CL-BIB-0479)

URBAN AIR TOXICS PROGRAM (M001 MONITORING

VOLATILE ORGANIC COMPOUNDS (CL-VOC)
Destruction of VOC/Hazardous Air Pollutant (HAP) Emissions via Catalytic Incineration (CL-BIB-0116)

Field Assessment of Steam VOC Removal Efficiencies (CL-BIB-0140)

New York State Stack Sampling of Resource Recovery Plants (CL-BIB-0146)

Engineering Study: Standards Development for Hazardous Waste Treatment, Storage, and Disposal Facilities (CL-BIB-0257)

Toxics Air Monitoring Systems (TAMS) (CL-BIB-0286)

Development of Ambient Methods for Hazardous Waste (CL-BIB-0288)

Evaluation of HAP Controls under Transient Conditions (CL-BIB-0332)

VOLATILE ORGANIC COMPOUNDS (CL-VOC) (cont.)
VOC and Hazardous Air Pollutant (HAP) Control of Department of Defense Facilities (CL-BIB-0335)

Vapor Phase Catalytic Oxidation of Mixed Volatile Organic Compounds (CL-BIB-0337)

Develop Dosimetry Models for VOC Hazard Identification (CL-BIB-0350)

Interim Air Toxics Data Base (CL-BIB-0351)

Investigation of Emissions from Burning of Agricultural Plastics (CL-BIB-0366)

Reproposal of Regulation for Boilers, Industrial Furnaces, and Incinerators That Use Hazardous Waste as Fuel (CL-BIB-0386)

Directory of State Contacts on Indoor Air Quality (IAQ) (CL-BIB-0397)

Validation of the Flux Chamber Method for Impoundment Pond Emissions (CL-BIB-0404)

Development of New Methods for SW846 (CL-BIB-0405)

Residential Wood Combustion and Automotive Emissions on the Boise, Idaho Air Shed (CL-BIB-0407)

TEAM Study: Indoor Air; 1982 Indoor Air Study of 2 Office Buildings (CL-BIB-0418)

Neurobehavioral and Sensory Irritant Effects of Complex VOC Mixtures in Humans (CL-BIB-0421)

Chamber Studies Characterizing the Organic Emissions from Kerosene Space Heaters: Phase II (CL-BIB-0449)

Low Cost Personal Monitoring Devices for Indoor Air (CL-BIB-0471)

Compendium of Indoor Air Quality Measurement Methods (CL-BIB-0472)

Identification of the Composition of Source-Related Groups of Volatile Organics in Ambient and Indoor Air (CL-BIB-0474)

Air Emissions from Hazardous Waste Stabilization (CL-BIB-0484)

Products of Incomplete Combustion (PICs) in Rotary Kiln Simulator (CL-BIB-0485)

VOLATILE ORGANIC COMPOUNDS (CL-VOC) (cont.)
Studies on the VOC Analytical Method by the Use of a TOC Analyzer (CL-BIB-0487)

Baltimore Total Exposure Assessment Methodology (TEAM) VOC Study (CL-BIB-0497)

New Studies of Population Exposure to VOCs and Major Sources of Exposure (CL-BIB-0498)

Biomarkers for Assessing Body Burden from Exposure to Toxic Environmental Pollutants (CL-BIB-0511)

Develop Analytical Method for VOCs in Whole Blood (CL-BIB-0512)

Chemical Ionization Mass Spectrometry for Trace-Level Determination of Ambient Polar Volatile Organic Compounds (CL-BIB-0513)

Personal Sampling Device (PSD) Modification and Analysis (CL-BIB-0518)

Development of a Mass Spectral Identification Scheme for Electron Impact Spectra of Volatile Compounds (CL-BIB-0519)

VOCs Samplers for Superfund Site Applications (CL-BIB-0520)

Field Evaluation of Methodology for Semi-Volatile Compounds (CL-BIB-0523)

Multi-Sorbent Preconcentrator (CL-BIB-0524)

Development of a Polar VOC Detector Based on Photo-Induced Nucleation (CL-BIB-0526)

Evaluation of Canister-Based Sampling in the TAMS Network (CL-BIB-0533)

STRATEGIES FOR CONTROLLING THE OXIDANT PROBLEM IN MAJOR URBAN AREAS (WY01 PROJECT 001)

WEAVING MILLS, SYNTHETICS (222)
Comparative Research in Analytical Pathology (CL-BIB-0216)

WEAVING MILLS, SYNTHETICS (2221)
Comparative Research in Analytical Pathology (CL-BIB-0216)

WELDING FUMES (CL-WELD)
Prospective Epidemiologic Industrial Hygiene Study of Mild Steel Welders (CL-BIB-0202)

WELDING FUMES (CL-WELD) (cont.)
Retrospective Cohort Investigation of Non-Asbestos Welders (CL-BIB-0240)

WELDING REPAIR (7692)
Prospective Epidemiologic Industrial Hygiene Study of Mild Steel Welders (CL-BIB-0202)

Retrospective Cohort Investigation of Non-Asbestos Welders (CL-BIB-0240)

WOOD SMOKE (CL-WOOD)
Integrated Air Cancer Project: Wood Stove Operating Profiles (CL-BIB-0128)

Analytical Methods Development for Toxic Substances (CL-BIB-0287)

Determining Woodstove Catalyst Emission Control Performance Degradation (CL-BIB-0329)

Study of the Effects of Appliance Type and Operating Variables on Residential Wood Combustion Emissions (CL-BIB-0330)

North West Woodstove Study (CL-BIB-0334)

Woodburning Survey (Colorado) (CL-BIB-0443)

Northeast Cooperative Woodstove Study - Phase II (CL-BIB-0452)

The Influence of Woodburning on the Mutagenicity of Air Outdoor and Indoors (CL-BIB-0457)

Mutagenicity of Organics Associated with PM-2.5 and PM-10 Hi-Vol Particulates from a Wood Smoke Impacted Residential Area (CL-BIB-0466)

Interpretation of Field Performance Audit Data in Woodstove Emission Measurement Programs (CL-BIB-0482)

Investigation of the Blaze Icing KEJ1101 (Catalytic Woodstove) Operating Characteristics (CL-BIB-0504)

Chemical Fractionation and Analysis of China Coal Combustion Emission Samples (CL-BIB-0516)

SURVEY OF WOOD USE FOR RESIDENTIAL WOODBURNING IN SHERIDAN AND LANDER, WYOMING (WY01 PROJECT 001)

WRECKING AND DEMOLITION WORK (1795)
Asbestos NESHAP Revision (CL-BIB-0018)

XYLENE (1330-20-7)
Decision on Regulation of Xylene Under the Clean Air Act (CL-BIB-0052)

A Risk Assessment-based Air Enforcement Stragegy for Harris County, Texas (CL-BIB-0344)

Measurement of Selected Air Toxics (Montana) (CL-BIB-0444)

Analysis of Toxic Organic Vapors in Air Using a Portable Photoionization Gas Chromatograph (CL-BIB-0495)

URBAN AIR TOXICS PROGRAM (M001 MONITORING 1)

ASSESSMENT OF EMISSIONS FROM ADJACENT INDUSTRIES IMPACTING THE BROOKHURST SUBDIVISION, NATRONA COUNTY, WYOMING (WY01 PROJECT 002)

ZINC (7440-66-6)
Field Test Evaluation of a Methodology for Measuring Emissions of Selected Toxic Metals from Stationary Sources (CL-BIB-0455)

URBAN AIR TOXICS PROGRAM (M001 MONITORING 1)

NUMERIC TERMS

01 (AGRICULTURAL PRODUCTION-CROPS)
Pesticide Impact Study from Field and Slash Burning (CL-BIB-0159)

Process Evaluation of Ambient Air Monitoring Near a Sugar Beet Processing Plant in Idaho (CL-BIB-0296)

013 (FIELD CROPS, EXCEPT CASH GRAINS)
Process Evaluation of Ambient Air Monitoring Near a Sugar Beet Processing Plant in Idaho (CL-BIB-0296)

0133 (SUGAR CROPS)
Process Evaluation of Ambient Air Monitoring Near a Sugar Beet Processing Plant in Idaho (CL-BIB-0296)

07 (AGRICULTURAL SERVICES)
Pesticide Impact Study from Field and Slash Burning (CL-BIB-0159)

08 (FORESTRY)
Pesticide Impact Study from Field and Slash Burning (CL-BIB-0159)

10 (METAL MINING)
National Occupational Health Survey of Mining (CL-BIB-0198)

Mortality of Diesel Exposed Miners (CL-BIB-0213)

Uranium Miners-Low Dose Investigation (CL-BIB-0244)

Pulmonary Response to Inhaled Fibrogenic Minerals (CL-BIB-0308)

100-41-4 (ETHYL BENZENE)
Analysis of Toxic Organic Vapors in Air Using a Portable Photoionization Gas Chromatograph (CL-BIB-0495)

100-42-5 (STYRENE)
Update of Completed Cohort Mortality Studies - NCI (CL-BIB-0227)

10028-15-6 (OZONE)
STRATEGIES FOR CONTROLLING THE OXIDANT PROBLEM IN MAJOR URBAN AREAS (NY01 PROJECT 001)

10043-92-2 (RADON)
Uranium Miners-Low Dose Investigation (CL-BIB-0244)

Development and Demonstration of Indoor Radon Reduction Measures for Homes (CL-BIB-0312)

Investigation of Radon Entry into Houses and Effectiveness of Mitigation Techniques - Evaluation Phase (CL-BIB-0317)

Chlordane/Radon Mitigation Project (CL-BIB-0338)

Directory of State Contacts on Indoor Air Quality (IAQ) (CL-BIB-0397)

State Surveys (CL-BIB-0424)

House Evaluation Program (CL-BIB-0425)

Land Evaluation and Soil Gas Studies (CL-BIB-0426)

Radon Demonstration Program (CL-BIB-0427)

Study of Radon in Drinking Water (CL-BIB-0428)

Epidemiological Study of Radon Effects (CL-BIB-0429)

Investigation of Radon Entry into Dwellings and the Effects of Selected Radon Mitigation Techniques (CL-BIB-0441)

10043-92-2 (RADON) (cont.)

Investigation of Radon Entry into Houses and Effectiveness of Mitigation Techniques - Evaluation Phase (CL-BIB-0442)

Phase I Development Demonstration of Mitigation for Florida Houses (CL-BIB-0447)

Fundamental Radon Mitigation Studies (CL-BIB-0478)

Design, Develop and Deliver Three Prototype Systems for Radon Measurement (CL-BIB-0493)

Effectiveness of Various Surface Coatings in Reducing Low Pressure-Driven Influx of Radon Through Concrete Block Basement Walls (CL-BIB-0499)

Follow-on Radon Measurements in 40 Eastern Pennsylvania Houses Using Radon Reduction Techniques (CL-BIB-0501)

Installations and Measurements on Radon Demonstration Project Houses in Clinton, NJ (CL-BIB-0527)

The Design and Installation of a Passive Radon Mitigation System (CL-BIB-0528)

Study to Field Test and Demonstrate Radon Prevention Techniques on New Homes (CL-BIB-0529)

Preparation of a Radon/New Construction Report (CL-BIB-0530)

Monitoring the Effectiveness of Existing Radon Mitigation Techniques in Project Houses in Clinton, NJ (CL-BIB-0531)

Collection of Information on the Application of Radon-Resistant Construction Techniques in New Residential Housing Stock (CL-BIB-0532)

RADON CONCENTRATION STUDY - TOLEDO AREA (OH04 RADON STUDY '86)

101-14-4 (CUREME)

Investigation of Workers Exposed to MBOCA (CL-BIB-0225)

Epidemiologic and Industrial Hygiene Support of Toxic Substance Control Act - EPA (CL-BIB-0232)

Arylamine Adducts in Blood as Indicators of Exposure (CL-BIB-0304)

101-77-9 (METHYLENEDIANILINE,4,4'-)

Industrywide Study of Workers Exposed to 4,4'-Methylenedianiline (MDA) (CL-BIB-0239)

10102-44-0 (NITROGEN DIOXIDE)

Low Cost Personal Monitoring Devices for Indoor Air (CL-BIB-0471)

Design Change of NO2 Electrochemical Personal Exposure Monitor (PEM) (CL-BIB-0509)

Determine Effect of Temperature Variation on NO2 Passive Sampling Device (PSD) (CL-BIB-0510)

Field Evaluation of Methodology for Semi-Volatile Compounds (CL-BIB-0523)

1987-1988 NMOC/NOX SUMMER STUDY (AMBIENT MONITORING) (FL02 KPDT0001)

STRATEGIES FOR CONTROLLING THE OXIDANT PROBLEM IN MAJOR URBAN AREAS (NY01 PROJECT 001)

103-45-7 (PHENYLETHANOL ACETATE)

Information Gathering and Risk Analysis of Existing Data on Phenylethanol and Phenylethanol Acetate (CL-BIB-0077)

106-46-7 (DICHLOROBENZENE,1,4-)

Decision on Regulation of Air Emissions from Isocyanate Production Facilities (CL-BIB-0050)

Paradichlorobenzene (Used in Moth Repellents and Air Fresheners) (CL-BIB-0436)

New Studies of Population Exposure to VOCs and Major Sources of Exposure (CL-BIB-0498)

URBAN AIR TOXICS PROGRAM (MO01 MONITORING 1)

106-89-8 (EPICHLOROHYDRIN)

Decision on Regulation of Epichlorohydrin Under the Clean Air Act (CL-BIB-0378)

106-99-0 (BUTADIENE,1,3-)

Mortality Study of Chemical Plants in Kanawha Valley, West Virginia (CL-BIB-0221)

Update of Completed Cohort Mortality Studies - NCI (CL-BIB-0227)

Industrial Hygiene Characterization of 1,3-Butadiene Exposed Workers (CL-BIB-0234)

Hazardous Organic NESHAP (CL-BIB-0261)

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108-31-6 (MALEIC ANHYDRIDE)
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115-07-1 (PROPYLENE)
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1310-73-2 (SODIUM HYDROXIDE)
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132-64-9 (DIBENZOFURAN)
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1330-20-7 (XYLENE)
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Study of Workers in the Dusty Trades in North Carolina - NCI (CL-BIB-0207)

Polycyclic Aromatic Hydrocarbons, Particulates and Lung Defense Mechanisms (CL-BIB-0217)

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National Emission Standards for Hazardous Air Pollutants: Supplement to 86/006 Compilation, Current as of January 1988 (CL-BIB-0343)

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1332-37-2 (IRON OXIDE)
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15438-31-0 (IRON)
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26471-62-5 (TOLUENE DIISOCYANATE)
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34465-46-8 (HEXACHLORODIBENZODIOXIN,1,2,3,6,7,8-)
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49 (ELECTRIC, GAS, AND SANITARY SERVICES) (cont.)
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Ambient Air Monitoring for PCBs in El Dorado, Arkansas (CL-BIB-0299)

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Recommended Guidelines for Stack Testing at Municipal Waste Combustion Facilities (CL-BIB-0367)

Investigation, Documentation and Testing of a Proposed Wet Deposition and Related Algorithms to ISC Models (CL-BIB-0370)

Reproposal of Regulation for Boilers, Industrial Furnaces, and Incinerators That Use Hazardous Waste as Fuel (CL-BIB-0386)

Multimedia, Multipollutant Field Study to Establish Levels of Toxics Contained in Air, Soil, Sediments, Water and Agricultural Products from a Model Municipal Waste Combustor (CL-BIB-0389)

Performance Audit Results for POHC Testing During RCRA Trial Burns (CL-BIB-0403)

Particulate Matter-Organic Compounds Interactions on Municipal Incinerator Flyash (CL-BIB-0454)

Field Test Evaluation of a Methodology for Measuring Emissions of Selected Toxic Metals from Stationary Sources (CL-BIB-0455)

Laboratory Evaluation of a Test Method for Measuring Emissions of Selected Toxic Metals from the Incineration of Hazardous Materials (CL-BIB-0456)

495 (SANITARY SERVICES) (cont.)
Trace Metal Aerosol (CL-BIB-0475)

Dilution Sampling System (CL-BIB-0477)

Sampling and Analysis Experiments for Products of Incomplete Combustion (PICs) (CL-BIB-0479)

Products of Incomplete Combustion (PICs) in Rotary Kiln Simulator (CL-BIB-0485)

Parametric Testing for Municipal Waste Combustion at Marion County, Oregon (CL-BIB-0491)

Method for Determination of Polychlorinated Dibenzo-p-dioxins and Dibenzofurans in Stack Gas Emissions and Ambient Air (CL-BIB-0496)

OKLAHOMA AIR POLLUTION CONTROL REGULATION 2.3 (REVISION) (OK01 PROJECT 2.3)

RUTLAND RESOURCE RECOVERY FACILITY SITE-SPECIFIC ENVIRONMENTAL ASSESSMENT (VT01 RUTLAND RRF01)

4952 (SEWERAGE SYSTEMS)
Rhode Island Toxics Integration Project--Evaluation of Air Emissions from Sewage Treatment Plants (CL-BIB-0145)

4953 (REFUSE SYSTEMS)
Exposure/Risk Assessment on Air Emissions From Treatment, Storage and Disposal Facilities (CL-BIB-0030)

Potential for Air Releases From CERCLA Sites (CL-BIB-0055)

Field Assessment of Steam VOC Removal Efficiencies (CL-BIB-0140)

Field Assessment of Waste Pretreatment at Refinery Land Treatment Facilities (CL-BIB-0141)

Field Assessment of Fate of Organics in Aerated Treatment Systems (CL-BIB-0142)

New York State Stack Sampling of Resource Recovery Plants (CL-BIB-0146)

Engineering Study: Standards Development for Hazardous Waste Treatment, Storage, and Disposal Facilities (CL-BIB-0257)

Dioxin Analysis of Hospital Incinerator Ash (CL-BIB-0292)

4953 (REFUSE SYSTEMS) (cont.)
Ambient Air Monitoring for PCBs in El Dorado, Arkansas (CL-BIB-0299)

Field Testing of Municipal Waste Combustors (CL-BIB-0362)

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OKLAHOMA AIR POLLUTION CONTROL REGULATION 2.3 (REVISION) (OK01 PROJECT 2.3)

4953 (REFUSE SYSTEMS) (cont.)
RUTLAND RESOURCE RECOVERY FACILITY SITE-SPECIFIC ENVIRONMENTAL ASSESSMENT (VT01 RUTLAND RRF01)

50-00-0 (FORMALDEHYDE)
AMBIENT MEASUREMENT AND MODELING OF FORMALDEHYDE CONCENTRATIONS IN THE SOUTH COAST AIR BASIN (CA03-004)

Mortality and Industrial Hygiene Study of Formaldehyde (CL-BIB-0223)

Epidemiologic and Industrial Hygiene Support of Toxic Substance Control Act - EPA (CL-BIB-0232)

Process Evaluation of Ambient Air Monitoring Near a Sugar Beet Processing Plant in Idaho (CL-BIB-0296)

A Risk Assessment-based Air Enforcement Stragegy for Harris County, Texas (CL-BIB-0344)

A Study of Formaldehyde from Pressed Wood Products (CL-BIB-0434)

Measurement of Selected Air Toxics (Montana) (CL-BIB-0444)

Low Cost Personal Monitoring Devices for Indoor Air (CL-BIB-0471)

Real-Time Formaldehyde Monitor (CL-BIB-0525)

Development of a Polar VOC Detector Based on Photo0 Induced Nucleation (CL-BIB-0526)

URBAN AIR TOXICS PROGRAM (MO01 MONITORING 1)

50-32-8 (BENZO(A)PYRENE)
New York State Stack Sampling of Resource Recovery Plants (CL-BIB-0146)

Polycyclic Aromatic Hydrocarbons, Particulates and Lung Defense Mechanisms (CL-BIB-0217)

URBAN AIR TOXICS PROGRAM (MO01 MONITORING 1)

51207-31-9 (TETRACHLORODIBENZOFURAN,2,3,7,8-)
New York State Stack Sampling of Resource Recovery Plants (CL-BIB-0146)

SOURCES, OCCURRENCE AND EFFECTS OF DIOXINS AND DIBENZOFURANS IN OHIO'S ENVIRONMENT (OH01 DIOXIN D001)

RUTLAND RESOURCE RECOVERY FACILITY SITE-SPECIFIC ENVIRONMENTAL ASSESSMENT (VT01 RUTLAND RRF01)

529-20-4 (TOLUALDEHYDE,O-)
Development of a Polar VOC Detector Based on Photo0 Induced Nucleation (CL-BIB-0526)

54-11-5 (L-NICOTINE)
Measurement and Evaluation of Personal Exposure to Aerosols (CL-BIB-0460)

Low Cost Personal Monitoring Devices for Indoor Air (CL-BIB-0471)

Compendium of Indoor Air Quality Measurement Methods (CL-BIB-0472)

Field Evaluation of Sampling and Analysis for Organic Pollutants in Indoor Air (CL-BIB-0515)

540-59-0 (DICHLOROETHYLENE,1,2-,CIS-TRANS-)
URBAN AIR TOXICS PROGRAM (MO01 MONITORING 1)

540-84-1 (PENTANE, 2,2,4-TRIMETHYL-)
Preliminary Evaluation of Test Methods for Volatile Organics in Hazardous Waste (CL-BIB-0480)

541-73-1 (DICHLOROBENZENE,1,3-)
URBAN AIR TOXICS PROGRAM (MO01 MONITORING 1)

542-75-6 (DICHLOROPROPENE,1,3-)
URBAN AIR TOXICS PROGRAM (MO01 MONITORING 1)

55-63-0 (NITROGLYCERINE)
Case-Control Mortality Study of Nitroglycerin-Exposed Workers (CL-BIB-0247)

55-86-7 (NITROGEN MUSTARD HYDROCHLORIDE)
Prevention Reference Manual: Overviews on Preventing and Controlling Accidental Releases of Selected Toxic Chemicals (CL-BIB-0388)

56-23-5 (CARBON TETRACHLORIDE)
Hazardous Organic NESHAP (CL-BIB-0261)

Sampling and Analysis Experiments for Products of Incomplete Combustion (PICs) (CL-BIB-0479)

URBAN AIR TOXICS PROGRAM (MO01 MONITORING 1)

57-74-9 (CHLORDANE)
Chlordane/Radon Mitigation Project (CL-BIB-0338)

584-84-9 (TOLUENE,24,DIISOCYANATE)
Decision on Regulation of Air Emissions from Isocyanate Production Facilities (CL-BIB-0050)

584-84-9 (TOLUENE,24,DIISOCYANATE) (cont.)
Health Assessment Document for Toluene Diisocyanate (CL-BIB-0374)

58718-66-4 (HALOWAX 1000)
Mortality Study of Workers Exposed to Halowax (CL-BIB-0410)

58718-67-5 (HALOWAX 1001)
Mortality Study of Workers Exposed to Halowax (CL-BIB-0410)

593-70-4 (CHLOROFLUOROMETHANE)
CFC Chemical Substitutes (CL-BIB-0324)

597-64-8 (STANNANE, TETRAETHYL-)
Prevention Reference Manual: Overviews on Preventing and Controlling Accidental Releases of Selected Toxic Chemicals (CL-BIB-0388)

598-55-0 (METHYL CARBAMATE)
Chemical Hazard Information Profile for Methyl Carbamate (CL-BIB-0283)

60-12-8 (PHENETHYL ALCOHOL)
Information Gathering and Risk Analysis of Existing Data on Phenylethanol and Phenylethanol Acetate (CL-BIB-0077)

624-83-9 (METHYL ISOCYANATE)
Decision on Regulation of Air Emissions from Isocyanate Production Facilities (CL-BIB-0050)

Mortality Study of Chemical Plants in Kanawha Valley, West Virginia (CL-BIB-0221)

Health Assessment Document for Methyl Isocyanate (CL-BIB-0373)

67-56-1 (METHANOL)
Decision on Regulation of Methanol Under the Clean Air Act (CL-BIB-0278)

67-64-1 (ACETONE)
Process Evaluation of Ambient Air Monitoring Near a Sugar Beet Processing Plant in Idaho (CL-BIB-0296)

67-66-3 (CHLOROFORM)
Hazardous Organic NESHAP (CL-BIB-0261)

URBAN AIR TOXICS PROGRAM (MO01 MONITORING 1)

68-12-2 (DIMETHYLFORMAMIDE,N,N-)
Dimethylformamide- NTP Chemical Manager (CL-BIB-0186)

71-36-3 (BUTYL ALCOHOL)
Preliminary Evaluation of Test Methods for Volatile Organics in Hazardous Waste (CL-BIB-0480)

71-43-2 (BENZENE)
Update of Completed Cohort Mortality Studies - NCI (CL-BIB-0227)

National Emission Standards for Hazardous Air Pollutants: Supplement to 86/006 Compilation, Current as of January 1988 (CL-BIB-0343)

A Risk Assessment-based Air Enforcement Stragegy for Harris County, Texas (CL-BIB-0344)

Measurement of Selected Air Toxics (Montana) (CL-BIB-0444)

Analysis of Toxic Organic Vapors in Air Using a Portable Photoionization Gas Chromatograph (CL-BIB-0495)

URBAN AIR TOXICS PROGRAM (MO01 MONITORING 1)

ASSESSMENT OF EMISSIONS FROM ADJACENT INDUSTRIES IMPACTING THE BROOKHURST SUBDIVISION, NATRONA COUNTY, WYOMING (WY01 PROJECT 002)

71-55-6 (TRICHLOROETHANE,1,1,1-)
Field Evaluation of a Heavy Gas Detection and Dispersion Approach Using a Whole Air Technique (CL-BIB-0347)

Refinement of a Detection and Analysis Approach to Volatile Organic Compound Release Characterization Using a Whole Air Technique (CL-BIB-0348)

Sampling and Analysis Experiments for Products of Incomplete Combustion (PICs) (CL-BIB-0479)

URBAN AIR TOXICS PROGRAM (MO01 MONITORING 1)

72 (PERSONAL SERVICES)
Measurement of Selected Air Toxics (Montana) (CL-BIB-0444)

721 (LAUNDRY, CLEANING, & GARMENT SERVICES)
Measurement of Selected Air Toxics (Montana) (CL-BIB-0444)

7212 (GARMENT PRESSING & CLEANERS' AGENTS)
Measurement of Selected Air Toxics (Montana) (CL-BIB-0444)

74-83-9 (METHYL BROMIDE)
Prevention Reference Manual: Overviews on Preventing and Controlling Accidental Releases of Selected Toxic Chemicals (CL-BIB-0388)

74-83-9 (METHYL BROMIDE) (cont.)
URBAN AIR TOXICS PROGRAM (MO01 MONITORING 1)

74-87-3 (METHYL CHLORIDE)
A Risk Assessment-based Air Enforcement Stragegy for Harris County, Texas (CL-BIB-0344)

Sampling and Analysis Experiments for Products of Incomplete Combustion (PICs) (CL-BIB-0479)

URBAN AIR TOXICS PROGRAM (MO01 MONITORING 1)

74-90-8 (HYDROGEN CYANIDE)
Decision on Regulation of Hydrocyanic Acid Under the Clean Air Act (CL-BIB-0264)

74-97-5 (BROMOCHLOROMETHANE)
URBAN AIR TOXICS PROGRAM (MO01 MONITORING 1)

7439-92-1 (LEAD POWDER)
An Assessment of the Effectiveness of OSHA's Lead Standard (CL-BIB-0413)

Field Test Evaluation of a Methodology for Measuring Emissions of Selected Toxic Metals from Stationary Sources (CL-BIB-0455)

URBAN AIR TOXICS PROGRAM (MO01 MONITORING 1)

RUTLAND RESOURCE RECOVERY FACILITY SITE-SPECIFIC ENVIRONMENTAL ASSESSMENT (VT01 RUTLAND RRF01)

7439-96-5 (MANGANESE)
Field Test Evaluation of a Methodology for Measuring Emissions of Selected Toxic Metals from Stationary Sources (CL-BIB-0455)

URBAN AIR TOXICS PROGRAM (MO01 MONITORING 1)

7439-97-6 (MERCURY)
National Emission Standards for Hazardous Air Pollutants: Supplement to 86/006 Compilation, Current as of January 1988 (CL-BIB-0343)

Field Test Evaluation of a Methodology for Measuring Emissions of Selected Toxic Metals from Stationary Sources (CL-BIB-0455)

RUTLAND RESOURCE RECOVERY FACILITY SITE-SPECIFIC ENVIRONMENTAL ASSESSMENT (VT01 RUTLAND RRF01)

7439-98-7 (MOLYBDENUM)
URBAN AIR TOXICS PROGRAM (MO01 MONITORING 1)

7440-02-0 (NICKEL POWDER)
Estimating Exposure to Arsenic, Beryllium, Cadmium, Chromium, and Nickel From Coal and Oil Combustion (CL-BIB-0029)

URBAN AIR TOXICS PROGRAM (MO01 MONITORING 1)

RUTLAND RESOURCE RECOVERY FACILITY SITE-SPECIFIC ENVIRONMENTAL ASSESSMENT (VT01 RUTLAND RRF01)

7440-02-2 (NICKEL)
Field Test Evaluation of a Methodology for Measuring Emissions of Selected Toxic Metals from Stationary Sources (CL-BIB-0455)

7440-22-4 (SILVER)
Field Test Evaluation of a Methodology for Measuring Emissions of Selected Toxic Metals from Stationary Sources (CL-BIB-0455)

7440-28-0 (THALLIUM, SOLUBLE COMPOUNDS, AS TL)
Field Test Evaluation of a Methodology for Measuring Emissions of Selected Toxic Metals from Stationary Sources (CL-BIB-0455)

7440-36-0 (ANTIMONY)
Cohort Mortality Study of Antimony Smelter Workers (CL-BIB-0233)

Field Test Evaluation of a Methodology for Measuring Emissions of Selected Toxic Metals from Stationary Sources (CL-BIB-0455)

7440-38-2 (ARSENIC AND COMPOUNDS AS AS)
Estimating Exposure to Arsenic, Beryllium, Cadmium, Chromium, and Nickel From Coal and Oil Combustion (CL-BIB-0029)

National Emission Standards for Hazardous Air Pollutants: Supplement to 86/006 Compilation, Current as of January 1988 (CL-BIB-0343)

Field Test Evaluation of a Methodology for Measuring Emissions of Selected Toxic Metals from Stationary Sources (CL-BIB-0455)

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RUTLAND RESOURCE RECOVERY FACILITY SITE-SPECIFIC ENVIRONMENTAL ASSESSMENT (VT01 RUTLAND RRF01)

7440-39-3 (BARIUM)
Field Test Evaluation of a Methodology for Measuring Emissions of Selected Toxic Metals from Stationary Sources (CL-BIB-0455)

URBAN AIR TOXICS PROGRAM (MO01 MONITORING 1)

7440-41-7 (BERYLLIUM)
Estimating Exposure to Arsenic, Beryllium, Cadmium, Chromium, and Nickel From Coal and Oil Combustion (CL-BIB-0029)

Beryllium Retrospective Cohort Investigation - NCI (CL-BIB-0229)

National Emission Standards for Hazardous Air Pollutants: Supplement to 86/006 Compilation, Current as of January 1988 (CL-BIB-0343)

Beryllium NESHAP Review (CL-BIB-0382)

Field Test Evaluation of a Methodology for Measuring Emissions of Selected Toxic Metals from Stationary Sources (CL-BIB-0455)

URBAN AIR TOXICS PROGRAM (MO01 MONITORING 1)

RUTLAND RESOURCE RECOVERY FACILITY SITE-SPECIFIC ENVIRONMENTAL ASSESSMENT (VT01 RUTLAND RRF01)

7440-43-9 (CADMIUM)
Cadmium NESHAP (CL-BIB-0010)

Estimating Exposure to Arsenic, Beryllium, Cadmium, Chromium, and Nickel From Coal and Oil Combustion (CL-BIB-0029)

Neurotoxicity from Exposures to Heavy Metals (CL-BIB-0168)

Update of Completed Cohort Mortality Studies - NCI (CL-BIB-0227)

Engineering Study: Standards Development for Hazardous Waste Treatment, Storage, and Disposal Facilities (CL-BIB-0257)

Field Test Evaluation of a Methodology for Measuring Emissions of Selected Toxic Metals from Stationary Sources (CL-BIB-0455)

URBAN AIR TOXICS PROGRAM (MO01 MONITORING 1)

RUTLAND RESOURCE RECOVERY FACILITY SITE-SPECIFIC ENVIRONMENTAL ASSESSMENT (VT01 RUTLAND RRF01)

7440-47-3 (CHROMIUM)
Chromium NESHAP (CL-BIB-0020)

Estimating Exposure to Arsenic, Beryllium, Cadmium, Chromium, and Nickel From Coal and Oil Combustion (CL-BIB-0029)

Mortality and Industrial Hygiene Characteristics of Workers Exposed to Lead Chromate Paints - NCI (CL-BIB-0228)

Health Assessment for Chromium, Update (CL-BIB-0279)

7440-47-3 (CHROMIUM) (cont.)
Field Testing and Method Evaluation for Industrial Cooling Towers (CL-BIB-0360)

Field Testing and Method Evaluation of Chrome Electroplating Plants (CL-BIB-0361)

Chromium Electroplating NESHAP Development (CL-BIB-0384)

Industrial Cooling Towers Chromium NESHAP Development (CL-BIB-0385)

Field Test Evaluation of a Methodology for Measuring Emissions of Selected Toxic Metals from Stationary Sources (CL-BIB-0455)

URBAN AIR TOXICS PROGRAM (M001 MONITORING 1)

RUTLAND RESOURCE RECOVERY FACILITY SITE-SPECIFIC ENVIRONMENTAL ASSESSMENT (VT01 RUTLAND RRF01)

JORGENSEN STEEL BAGHOUSE CHROMIUM EMISSIONS (WA02 PSAPCA 10)

7440-48-4 (COBALT)
URBAN AIR TOXICS PROGRAM (M001 MONITORING 1)

7440-50-8 (COPPER)
Field Test Evaluation of a Methodology for Measuring Emissions of Selected Toxic Metals from Stationary Sources (CL-BIB-0455)

URBAN AIR TOXICS PROGRAM (M001 MONITORING 1)

7440-62-2 (VANADIUM)
URBAN AIR TOXICS PROGRAM (M001 MONITORING 1)

7440-66-6 (ZINC)
Field Test Evaluation of a Methodology for Measuring Emissions of Selected Toxic Metals from Stationary Sources (CL-BIB-0455)

URBAN AIR TOXICS PROGRAM (M001 MONITORING 1)

7487-94-7 (MERCURIC CHLORIDE)
Decision on Regulation of Mercuric Chloride Under the Clean Air Act (CL-BIB-0277)

75 (AUTO REPAIR, SERVICES, AND GARAGES)
Measurement of Selected Air Toxics (Montana) (CL-BIB-0444)

75-00-3 (CHLOROETHANE)
Decision on Regulation of Ethyl Chloride Under the Clean Air Act (CL-BIB-0268)

URBAN AIR TOXICS PROGRAM (M001 MONITORING 1)

75-01-4 (VINYL CHLORIDE)
Update of Completed Cohort Mortality Studies - NCI (CL-BIB-0227)

National Emission Standards for Hazardous Air Pollutants: Supplement to 86/006 Compilation, Current as of January 1988 (CL-BIB-0343)

Sampling and Analysis Experiments for Products of Incomplete Combustion (PICs) (CL-BIB-0479)

URBAN AIR TOXICS PROGRAM (M001 MONITORING 1)

75-07-0 (ACETALDEHYDE)
Decision on Regulation of Acetaldehyde Under The Clean Air Act (CL-BIB-0034)

Health Assessment Document for Acetaldehyde, External Review (CL-BIB-0061)

Acetaldehyde Preliminary Source Assessment (CL-BIB-0256)

Engineering Study: Standards Development for Hazardous Waste Treatment, Storage, and Disposal Facilities (CL-BIB-0257)

Process Evaluation of Ambient Air Monitoring Near a Sugar Beet Processing Plant in Idaho (CL-BIB-0296)

Measurement of Selected Air Toxics (Montana) (CL-BIB-0444)

Development of a Polar VOC Detector Based on Photo0 Induced Nucleation (CL-BIB-0526)

URBAN AIR TOXICS PROGRAM (M001 MONITORING 1)

75-09-2 (METHYLENE CHLORIDE)
Hazardous Organic NESHAP (CL-BIB-0261)

Integrated Solvents Workgroup (CL-BIB-0437)

Preliminary Evaluation of Test Methods for Volatile Organics in Hazardous Waste (CL-BIB-0480)

URBAN AIR TOXICS PROGRAM (M001 MONITORING 1)

75-21-8 (ETHYLENE OXIDE)
Temporal Factors Influencing Carcinogenicity of Industrial Chemicals (CL-BIB-0190)

Mortality Study of Chemical Plants in Kanawha Valley, West Virginia (CL-BIB-0221)

75-21-8 (ETHYLENE OXIDE) (cont.)
Ethylene Oxide Mortality Study - NCI (CL-BIB-0224)

Epidemiologic and Industrial Hygiene Support of Toxic Substance Control Act - EPA (CL-BIB-0232)

Hazardous Organic NESHAP (CL-BIB-0261)

Support of EPA's Environmental Epidemiologic Program (CL-BIB-0377)

Support of EPA's Environmental Epidemiologic Program (CL-BIB-0409)

Evaluation of Sampling Methods for Measuring Ethylene Oxide Emissions from Sterilization Chambers and Control Units and Determining Control Unit Efficiency (CL-BIB-0483)

75-25-2 (BROMOFORM)
URBAN AIR TOXICS PROGRAM (M001 MONITORING 1)

75-27-4 (BROMODICHLOROMETHANE)
URBAN AIR TOXICS PROGRAM (M001 MONITORING 1)

75-34-3 (DICHLOROETHANE,1,1-)
URBAN AIR TOXICS PROGRAM (M001 MONITORING 1)

75-35-4 (DICHLOROETHYLENE,1,1-)
Sampling and Analysis Experiments for Products of Incomplete Combustion (PICs) (CL-BIB-0479)

URBAN AIR TOXICS PROGRAM (M001 MONITORING 1)

75-44-5 (PHOSGENE)
Decision on Regulation of Phosgene Under the Clean Air Act (CL-BIB-0046)

Decision on Regulation of Air Emissions from Isocyanate Production Facilities (CL-BIB-0050)

Health Assessment Document for Phosgene, External Review (CL-BIB-0063)

Engineering Study: Standards Development for Hazardous Waste Treatment, Storage, and Disposal Facilities (CL-BIB-0257)

75-56-9 (PROPYLENE OXIDE)
Decision on Regulation of Propylene Oxide Under the Clean Air Act (CL-BIB-0048)

753 (AUTOMOTIVE REPAIR SHOPS)
Measurement of Selected Air Toxics (Montana) (CL-BIB-0444)

76 (MISCELLANEOUS REPAIR SERVICES)
Prospective Epidemiologic Industrial Hygiene Study of Mild Steel Welders (CL-BIB-0202)

Retrospective Cohort Investigation of Non-Asbestos Welders (CL-BIB-0240)

76-02-8 (ACETYL CHLORIDE, TRICHLORO-)
Prevention Reference Manual: Overviews on Preventing and Controlling Accidental Releases of Selected Toxic Chemicals (CL-BIB-0388)

7631-86-9 (SILICA)
Effective Silica Indices of Respirable Mineral Dusts (CL-BIB-0195)

National Occupational Health Survey of Mining (CL-BIB-0198)

Study of Workers in the Dusty Trades in North Carolina - NCI (CL-BIB-0207)

Morbidity/Mortality Study of Sand Industry (CL-BIB-0208)

Polycyclic Aromatic Hydrocarbons, Particulates and Lung Defense Mechanisms (CL-BIB-0217)

Alveolar Type II Cells: Effect of Silica (CL-BIB-0218)

7647-01-0 (HYDROGEN CHLORIDE)
Decision on Regulation of Chlorine and Hydrochloric Acid Under the Clean Air Act (CL-BIB-0037)

Decision on Regulation of Air Emissions from Isocyanate Production Facilities (CL-BIB-0050)

Health Assessment Document for Chlorine and Hydrogen Chloride, External Review (CL-BIB-0280)

Parametric Testing for Municipal Waste Combustion at Marion County, Oregon (CL-BIB-0491)

Emission Testing of a Mass Burn Combustor using and ESP/Spray Dryer Control System (CL-BIB-0505)

A .SMENT OF EMISSIONS FROM ADJACENT INDUSTRIES IMPACTING THE BROOKHURST SUBDIVISION, NATRONA COUNTY, WYOMING (WY01 PROJECT 002)

7664-41-7 (AMMONIA)
Decision on Regulation of Ammonia Under the Clean Air Act (CL-BIB-0036)

7664-93-9 (SULFURIC ACID)
Laryngeal Cancer in Workers Exposed to Sulfuric Acid (CL-BIB-0241)

ASSESSMENT OF EMISSIONS FROM ADJACENT INDUSTRIES IMPACTING THE BROOKHURST SUBDIVISION, NATRONA COUNTY, WYOMING (WY01 PROJECT 002)

769 (MISCELLANEOUS REPAIR SHOPS)
Prospective Epidemiologic Industrial Hygiene Study of Mild Steel Welders (CL-BIB-0202)

Retrospective Cohort Investigation of Non-Asbestos Welders (CL-BIB-0240)

7692 (WELDING REPAIR)
Prospective Epidemiologic Industrial Hygiene Study of Mild Steel Welders (CL-BIB-0202)

Retrospective Cohort Investigation of Non-Asbestos Welders (CL-BIB-0240)

77-47-4 (HEXACHLOROCYCLOPENTADIENE)
Characterization of Emissions from a Hexachlorocyclopentadiene Manufacturer in Memphis, TN (CL-BIB-0500)

7723-14-0 (PHOSPHOROUS (YELLOW))
Decision on Regulation of Phosphorus Under the Clean Air Act (CL-BIB-0267)

Field Test Evaluation of a Methodology for Measuring Emissions of Selected Toxic Metals from Stationary Sources (CL-BIB-0455)

7758-97-6 (LEAD CHROMATE)
Mortality and Industrial Hygiene Characteristics of Workers Exposed to Lead Chromate Paints - NCI (CL-BIB-0228)

7782-49-2 (SELENIUM COMPOUNDS, AS SE)
Decision on Regulation of Selenium and Its Compounds Under the Clean Air Act (CL-BIB-0270)

Field Test Evaluation of a Methodology for Measuring Emissions of Selected Toxic Metals from Stationary Sources (CL-BIB-0455)

7782-50-5 (CHLORINE)
Decision on Regulation of Chlorine and Hydrochloric Acid Under the Clean Air Act (CL-BIB-0037)

Health Assessment Document for Chlorine and Hydrogen Chloride, External Review (CL-BIB-0280)

7783-06-4 (HYDROGEN SULFIDE)
Decision on Regulation of Hydrogen Sulfide Under the Clean Air Act (CL-BIB-0042)

Health Assessment Document for Hydrogen Sulfide, External Review (CL-BIB-0062)

Prevention Reference Manual: Overviews on Preventing and Controlling Accidental Releases of Selected Toxic Chemicals (CL-BIB-0388)

ASSESSMENT OF EMISSIONS FROM ADJACENT INDUSTRIES IMPACTING THE BROOKHURST SUBDIVISION, NATRONA COUNTY, WYOMING (WY01 PROJECT 002)

78-40-0 (TRIETHYL PHOSPHATE)
Risk Analysis of Existing Data on Triethyl Phosphate (CL-BIB-0075)

78-87-5 (DICHLOROPROPANE,1,2-)
URBAN AIR TOXICS PROGRAM (MO01 MONITORING 1)

78-93-3 (METHYL ETHYL KETONE)
Development and Evaluation of Biomonitoring Methods for Methyl Ethyl Ketone (CL-BIB-0164)

Preliminary Evaluation of Test Methods for Volatile Organics in Hazardous Waste (CL-BIB-0480)

79-00-5 (TRICHLOROETHANE,1,1,2-)
URBAN AIR TOXICS PROGRAM (MO01 MONITORING 1)

79-01-6 (TRICHLOROETHYLENE)
Hazardous Organic NESHAP (CL-BIB-0261)

Health Assessment for Trichloroethylene Cancer Update (CL-BIB-0282)

Locating and Estimating Air Emissions from Sources of Perchloroethylene and Trichloroethylene (CL-BIB-0356)

Integrated Solvents Workgroup (CL-BIB-0437)

Sampling and Analysis Experiments for Products of Incomplete Combustion (PICs) (CL-BIB-0479)

Analysis of Toxic Organic Vapors in Air Using a Portable Photoionization Gas Chromatograph (CL-BIB-0495)

URBAN AIR TOXICS PROGRAM (MO01 MONITORING 1)

79-11-8 (CHLOROACETIC ACID)
Prevention Reference Manual: Overviews on Preventing and Controlling Accidental Releases of Selected Toxic Chemicals (CL-BIB-0388)

79-34-5 (TETRACHLOROETHANE,1,1,2,2-)
URBAN AIR TOXICS PROGRAM (MO01 MONITORING 1)

80 (HEALTH SERVICES)
Dioxin Analysis of Hospital Incinerator Ash (CL-BIB-0292)

8006-61-9 (GASOLINE)
Decision on Regulation of Gasoline Vapors Under the Clean Air Act (CL-BIB-0041)

New Studies of Population Exposure to VOCs and Major Sources of Exposure (CL-BIB-0498)

8052-42-4 (ASPHALT (PETROLEUM) FUMES)
Assessment of Cocarcinogenic Activity of Asphalt Fumes (CL-BIB-0174)

806 (HOSPITALS)
Dioxin Analysis of Hospital Incinerator Ash (CL-BIB-0292)

85-41-6 (PHTHALIMIDE)
Risk Analysis of Existing Data on Phthalimide (CL-BIB-0079)

85-44-9 (PHTHALIC ANHYDRIDE)
Decision on Regulation of Phthalic Anhydride Under the Clean Air Act (CL-BIB-0271)

87-86-5 (PENTACHLOROPHENOL)
Mortality of Dioxin Workers (CL-BIB-0226)

91-20-3 (NAPHTHALENE)
Preliminary Evaluation of Test Methods for Volatile Organics in Hazardous Waste (CL-BIB-0480)

95-14-7 (BENZOTRIAZOLE,1,2,3-)
Chemical Hazard Information Profile for Benzotriazole-Based UV Light Stabilizers (CL-BIB-0284)

95-50-1 (DICHLOROBENZENE,1,2-)
URBAN AIR TOXICS PROGRAM (MO01 MONITORING 1)

95-80-7 (DIAMINOTOLUENE,2,4-)
Decision on Regulation of Air Emissions from Isocyanate Production Facilities (CL-BIB-0050)

95-95-4 (TRICHLOROPHENOL,2,4,5-)
Mortality of Dioxin Workers (CL-BIB-0226)

98-05-5 (BENZENEARSONIC ACID)
Prevention Reference Manual: Overviews on Preventing and Controlling Accidental Releases of Selected Toxic Chemicals (CL-BIB-0388)

98-07-7 (BENZOTRICHLORIDE)
Prevention Reference Manual: Overviews on Preventing and Controlling Accidental Releases of Selected Toxic Chemicals (CL-BIB-0388)

98-95-3 (NITROBENZENE)
Development of a Polar VOC Detector Based on Photo0 Induced Nucleation (CL-BIB-0526)

APPENDIX

APPENDIX

EPA OFFICE OF DRINKING WATER PROJECTS

The EPA Office of Drinking Water (ODW) has studies underway on several potentially toxic chemicals as part of its regulatory development activities. Information on these projects has been included in the National Air Toxics Information Clearinghouse ongoing research and regulatory development projects document because many toxic drinking water contaminants being studied by ODW are also potential air pollutants. Clearinghouse users may find health information generated by ODW projects useful. For further information on the projects described below, contact: Joseph Cotruvo or Craig Vogt, Criteria and Standards Division, Office of Drinking Water (WH-550D), U. S. Environmental Protection Agency, 401 M Street, S.W., Washington, D.C., 20460, (202) 382-7575, (FTS) 382-7575.

Under the Safe Drinking Water Act (SDWA), the U. S. Environmental Protection Agency is required to publish regulations which apply to public drinking water systems and control specific contaminants which in the Administrator's judgment "may have any adverse effect on the health of persons." Information concerning these regulations is listed below.

Drinking Water Regulations under 1986 Amendments to SDWA

Significant directives to EPA's standard-setting program for drinking water contaminants included in the 1986 Amendments to the SDWA are provided below:

- EPA is to set Maximum Contaminant Level Goals and National Primary Drinking Water Regulations for 83 specific contaminants and for any other contaminant in drinking water which may have any adverse effect upon the health of persons and which is known or anticipated to occur in public water systems.

- Recommended Maximum Contaminant Levels (RMCLs) are now termed Maximum Contaminant Level Goals (MCLGs). No changes were made in the basis of an MCLG; i.e.:

  > MCLGs are non-enforceable health goals which are to be set at the level at which no known or anticipated adverse effects on the health of persons occur and which allows an adequate margin of safety.

- Maximum Contaminant Levels (MCLs) are to be set as close to MCLGs as is feasible. The definition of "feasible" is as follows:

  > Feasible means with the use of the best technology, treatment techniques and other means, which the Administrator finds, after examination for efficacy under field conditions and not solely under laboratory conditions, are generally available (taking costs into consideration).

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Granular Activated Carbon (GAC) is stated in the SDWA as feasible for the control of synthetic organic chemicals (SOCs), and any technology or other means found to be best available for control of SOCs must be at least as effective in controlling SOCs as GAC.

- MCLGs and MCLs are to be proposed at the same time and also promulgated simultaneously.

- MCLGs and MCLs/Monitoring requirements are to be set for 83 contaminants listed in the SDWA. The best available technology (BAT) must also be specified for each.

  The 83 contaminants are shown in Table A-1. Seven substitutes are allowed if regulation of any seven other contaminants would be more protective of public health. The list of substitutes must be proposed by June 19, 1987.

- The timetable to produce the MCLGs and MCLs/Monitoring requirements is as follows:

  - 9 by June 19, 1987
  - 40 by June 19, 1988
  - 34 by June 19, 1989

- MCLGs and MCLs/Monitoring requirements are also to be set for other contaminants in drinking water that may pose a health risk.

  - The 1986 Amendments require the EPA to publish a list of drinking water contaminants that may require regulation under the SDWA.
  - The list must be published by January 1, 1988, and every 3 years following.
  - MCLGs and MCLs/Monitoring requirements are to be set for at least 25 contaminants on the list by January 1, 1991.
  - MCLGs and MCLs/Monitoring requirements are to be set for at least 25 contaminants every 3 years following January 1, 1991 (i.e., 1994, 1997, ...).

- Criteria must be established from which States can determine which surface water systems must install filtration. The criteria are to be set by December 19, 1987.

- A treatment technique regulation is to be set that will require all public water systems to use disinfection.

  - Variances are available. EPA will specify variance criteria.
  - The disinfection treatment rule must be promulgated by June 19, 1989.

- Requirements are to be set for water systems to monitor for unregulated contaminants.
  - Minimum monitoring frequency would be five years.
  - States can add/delete contaminants from list.
  - Monitoring regulations are to be promulgated by December 19, 1987.
- MCLGs and MCLs/Monitoring requirements are to be reviewed by EPA every three years.
- Other requirements/provisions of the 1986 Amendments:
  - Public notification regulations are to be changed to provide for different types and frequencies of notice depending upon the potential health risk. Final regulations are due September 19, 1987.
  - BAT for issuance of variances is to be set when MCLs are set. BAT may vary depending upon the size of systems and other factors, including costs.
  - Exemptions can be extended for systems with 500 connections or less. No limit is placed on the number of extensions but certain criteria will have to be met.
- A summary of deadlines pertinent to standard-setting is presented in Table A-2.
- The status of the National Primary Drinking Water Regulations is presented in Table A-3.

TABLE A-1. CONTAMINANTS REQUIRED TO BE REGULATED UNDER THE SDWA OF 1986

Volatile Organic Chemicals	
Trichloroethylene	Benzene
Tetrachloroethylene	Chlorobenzene
Carbon tetrachloride	Dichlorobenzene
1,1,1-Trichloroethane	Trichlorobenzene
1,2-Dichloroethane	1,1-Dichloroethylene
Vinyl chloride	trans-1,2-Dichloroethylene
Methylene chloride	cis-1,2-Dichloroethylene
Microbiology and Turbidity	
Total coliforms	Viruses
Turbidity	Standard plate count
Giardia lamblia	Legionella
Inorganics	
Arsenic	Molybdenum
Barium	Asbestos
Cadmium	Sulfate
Chromium	Copper
Lead	Vanadium
Mercury	Sodium
Nitrate	Nickel
Selenium	Zinc
Silver	Thallium
Fluoride	Beryllium
Aluminum	Cyanide
Antimony	
Organics	
Endrin	1,1,2-Trichloroethane
Lindane	Vydate
Methoxychlor	Simazine
Toxaphene	PAHs
2,4-D	PCBs
2,4,5-TP	Atrazine
Aldicarb	Phthalates
Chlordane	Acrylamide
Dalapon	Dibromochloropropane (DBCP)
Diquat	1,2-Dichloropropane
Endothall	Pentachlorophenol

TABLE A-1. CONTAMINANTS REQUIRED TO BE REGULATED UNDER THE SDWA OF 1986 (Continued)

Organics (Continued)

Glyphosate
Carbofuran
Alachlor
Epichlorohydrin
Toluene
Adipates
2,3,7,8-TCDD (Dioxin)
Pichloram
Dinoseb
Ethylene dibromide (EDB)
Dibromomethane
Xylene
Hexachlorocyclopentadiene

Radionuclides

Radium 226 and 228
Beta particle and photon radioactivity
Uranium
Gross alpha particle activity
Radon

TABLE A-2. SUMMARY OF DEADLINES FOR STANDARDS UNDER SDWA OF 1986

What	When
Nine MCLGs and MCLs/Monitoring Requirements	June 19, 1987
Propose Seven Substitutes	June 19, 1987
Public Notice Revisions	September 19, 1987
Filtration Criteria	December 19, 1987
Monitoring for Unregulated Contaminants	December 19, 1987
List of Contaminants	January 1, 1988
40 MCLGs and MCLs/Monitoring Requirements	June 19, 1988
34 MCLGs and MCLs/Monitoring Requirements	June 19, 1989
Disinfection Treatment	June 19, 1989
25 MCLGs and MCLs/Monitoring Requirements	January 1, 1991

TABLE A-3. NATIONAL REVISED PRIMARY DRINKING WATER REGULATIONS SCHEDULE

Phase	Date/Federal Register Citation
Phase 1: VOCs	
Advance notice of proposed rulemaking	March 4, 1982 47 FR 9350
Proposed MCLGs	June 12, 1984 49 FR 24330
Final MCLGs, propose MCLs, monitoring requirements	November 13, 1985 50 FR 46880
Final MCLs and monitoring requirements	July 8, 1987 52 FR 25690
Phase 2: SOCs, IOCs, Microbials	
Advance notice of proposed rulemaking	October 5, 1983 48 FR 45502
Proposed MCLGs	November 13, 1985 50 FR 46936
Reproposed MCLGs, proposed MCLs, monitoring for SOCs, IOCs	September 1988
Microbials: Surface Water Treatment Rule and Total Coliforms	
Proposed MCLGs, MCLs, treatment technique and monitoring	November 3, 1987 52 FR 42178
Final rules	June 1989
Phase 2A: Fluoride	
Advance notice of proposed rulemaking	October 5, 1983 48 FR 45502
Proposed MCLG	May 14, 1985 50 FR 20164

TABLE A-3. NATIONAL REVISED PRIMARY DRINKING WATER REGULATIONS SCHEDULE (Continued)

Phase	Date
Final MCLG	November 14, 1985 50 FR 47142
Proposed MCL, SMCL, monitoring requirements	November 14, 1985 50 FR 47156
Final MCL, SMCL, monitoring requirements	April 2, 1986 51 FR 11396
Phase 3: Radionuclides	
Advance notice of proposed rulemaking	September 30, 1986 51 FR 34836
Phase 4: Disinfection By-products	
MCLGs/MCLs	1991
Phase 5:	
Proposed MCLGs, MCLs, monitoring for 24 IOCs, SOCs	December 1988
Final MCLG, MCL, monitoring requirements	Summer 1989
Lead/Copper: Corrosion By-products	
Proposed	June 1988
Final	December 1988
Drinking Water Priority List/Substitutes:	
Proposed	July 8, 1987 52 FR 25720
Final	January 22, 1988 53 FR 1892

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15. SUPPLEMENTARY NOTES

16. ABSTRACT

The document is divided into two parts and an appendix. The first part lists 365 air toxics projects currently in progress at EPA, NIOSH, and State and local agencies. A brief description of each project and a contact name, office, and telephone number are given. The second part of the document contains the index that allows readers to locate projects of interest. Projects are indexed by agency, project type, chemical name, Chemical Abstract Service (CAS) number, and source category Standard Industrial Classification (SIC) Code. The appendix lists regulatory development projects on toxic chemicals underway at the EPA's Office of Drinking Water (ODW). While most of these projects are not directly related to air problems, health information on toxic chemicals from ODW projects may be of interest to Clearinghouse users.

17. KEY WORDS AND DOCUMENT ANALYSIS

a. DESCRIPTORS	b. IDENTIFIERS/OPEN ENDED TERMS	c. COSATI Field/Group
Toxic Air Pollutants State and local programs Federal Register	NATICH: National Air Toxics Information Clearinghouse	

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